DOCUMENT RESUME

ED 317 246 JC 900 198

AUTHOR Bender, Louis W., Ed.
TITLE Spotlight on the Transfer Function: A National Study of State Policies and Practices.
INSTITUTION American Association of Community and Junior Colleges, Washington, D.C.
REPORT NO ISBN-0-87117-213-5
PUB DATE 90
NOTE 78p.
PUB TYPE Reports - Evaluative/Feasibility (142) -- Collected Works - General (020)

EDRS PRICE MF01/PC04 Plus Postage.
DESCRIPTORS *Articulation (Education); Case Studies; *College Transfer Students; Community Colleges; Educational Legislation; National Surveys; *State School District Relationship; *Statewide Planning; *Transfer Policy; Two Year Colleges

ABSTRACT

An examination is provided of state policies relating to transfer and articulation and of the transfer problems and issues reported by community, technical, and junior colleges and students in various states. First, an executive summary addresses such issues as misunderstandings about the transfer/articulation phenomenon, trends revealed in state policies, concerns that have prompted increased state attention to transfer, and recommendations emerging from the study. Part I includes "State Articulation Policies: Myths and Realities," by Louis W. Bender, which analyzes state-level policies, legislative mandates, executive orders, regulations, and studies of state boards or other regulatory bodies. "Articulation and State-Level Information Systems: A Necessary Marriage," by William R. Odom, provides an idealized model of state-level articulation information systems. Part II consists of case study reports of successful transfer and articulation at the institutional or regional level in California, Florida, New Jersey, and Texas. This section contains "New Jersey Institute of Technology and Transfer Relations," by Gary Thomas; "An Articulated Program between the University of Central Florida and Valencia Community College," by William Michael Hooks and Frank E. Juge; "The Articulation/Transfer Activities of the Los Rios Community College District," by Barbara L. Howard; "Addendum: Transfer Opportunity Program," by Phil DuBois and Barbara L. Howard; and "A Context for Transfer Policy in Texas Higher Education," by Gloria Ann Lopez and Dale Campbell. (JMC)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED317246

Spotlight On The TRANSFER FUNCTION

A National Study of State Policies and Practices

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

J. Gollatscheck

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

X This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

LOUIS W. BENDER, EDITOR

JC 900 198

AMERICAN ASSOCIATION OF COMMUNITY AND JUNIOR COLLEGES

BEST COPY AVAILABLE

© Copyright 1990 by the American Association of Community and Junior Colleges
Printed in the U.S.A.

All rights reserved. No part of this book may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or by any information storage and retrieval system, without written permission from the publisher.

Published by the American Association of Community and Junior Colleges
National Center for Higher Education
One Dupont Circle, N.W., Suite 410
Washington, D.C. 20036
Phone: (202) 728-0200
ISBN 0-87117-213-5

About the Editor

Louis W. Bender is professor of higher education and director of the Southeastern Community College Leadership Program at The Florida State University in Tallahassee. He is the author, with Richard C. Richardson, Jr., of *Fostering Minority Access and Achievement in Higher Education*, a Ford Foundation study of articulation between two- and four-year institutions. An authority on state policies affecting community, technical, and junior colleges, Bender has served as a consultant to 37 states at the institutional level and 14 states at the system or state level. He received the 1985 Distinguished Service Award from the AACJC-affiliated Council of Universities and Colleges, and in 1989 he completed a three-year term on the AACJC Board of Directors.

Contents

Preface vii

Executive Summary ix

PART I

State Articulation Policies: Myths and Realities 3
Louis W. Bender

Articulation and State-Level Information Systems: A Necessary Marriage 23
William R. Odom

PART II

New Jersey Institute of Technology and Transfer Relations 33
Gary Thomas

An Articulated Program Between the University of Central Florida and Valencia Community College 43
Wm. Michael Hooks and Frank E. Juge

The Articulation/Transfer Activities of the Los Rios Community College District 49
Barbara L. Howard

Addendum: Transfer Opportunity Program 61
Phil DuBois and Barbara L. Howard

A Context for Transfer Policy in Texas Higher Education 65
Gloria Ann Lopez and Dale Campbell

Contributors 71

Preface

This report grew out of a study commissioned by the Board of Directors of the American Association of Community and Junior Colleges at the 1989 AACJC Convention. During its meeting, Board members discussed transfer problems and issues reported by community, technical, and junior college students in different states. Concern for such students and the transfer function of the two-year college prompted the AACJC Board to call for a national study of state policies relating to transfer and articulation. The Board also requested a limited number of case studies of exemplary practices occurring in different parts of the nation.

As a result, this report is made up of two parts. Part I covers content analysis of documents and reports of state-level policies representing legislative mandates, executive orders, regulations, and studies of state boards or other regulatory bodies, supplemented with telephone interviews with state officials from most states. A separate paper by William R. Odom, deputy executive director of the Florida State Board of Community Colleges, provides an idealized model of state-level articulation information systems, a necessity before verification can be made that practice is consistent with policy.

Part II is made up of case study reports of successful transfer and articulation at the institutional or regional level in California, Florida, New Jersey, and Texas. Many states have one or more comparable exemplary institutional or regional illustrations of where transfer and articulation work. Invariably, dedicated individuals are the true source of the successful practice, not policies or mandates. However, those policies or mandates often provide the framework for action, needing only the human element.

Reports of studies related to articulation carried out within the states, together with agreements and policies of voluntary statewide groups of two-year and four-year institutions, were included in the scope of this study whenever they dealt with transfer or articulation policies. There was no attempt to include the related research literature, although AACJC has published several important works on the subject. *Transfer: Making It Work,* edited by Richard A. Donovan, Barbara Schaier-Peleg, and Bruce Forer, reports on the Ford Foundation-funded project promoting urban community college transfer opportunities for minority students. Another publication, *The Articulation/Transfer Phenomenon: Patterns and Directions,* by Frederick C. Kintzer and James L. Wattenbarger, analyzed state patterns of articulation/transfer agreements from those legally based to those that were viewed as voluntary. Kintzer, also author of *Middleman in Higher Education,* has studied articulation practices in other countries as well. Dorothy

Knoell, an acknowledged pioneer and authority on transfer/articulation, is not only responsible for many of the studies of the California Postsecondary Education Commission, but also is author of a new AACJC book, *Transfer, Articulation, and Collaboration: Twenty-Five Years Later.*

Funds were not available to support visits to state capitals where extensive interviewing could verify interpretations or remove ambiguities between policies and practices of two- and four-year institutions or their state-level boards and agencies. Only a few states are able to provide hard data to verify whether policies are being implemented. Hence, there is no guarantee that performance is consistent with the practice called for by policies identified in this report. As a consequence, the reader interested in a certain policy identified with a specific state will need to determine the degree of acceptance and level of success within that state before reaching a conclusion.

Various definitions of transfer and articulation can be found in the literature. For this study, *transfer* was defined as a descriptor of the student who seeks to move from one institution to another expecting credit recognition for coursework successfully completed and expecting to be treated equitably with all other students. Transfer also describes mechanisms used by institutions to facilitate admission, credit recognition, and related services for such students.

Articulation refers to systematic efforts, processes, or services intended to ensure educational continuity and to facilitate orderly, unobstructed progress between levels or segments of institutions on a statewide, regional, or institution-to-institution basis. Among the systematic efforts for education continuity are program of study and course comparability or equivalency. Examples of articulation processes are admission and matriculation, orientation, counseling/advising, and transfer/articulation ombudsmanship. Systematic services include transfer credit evaluation and reporting mechanisms, financial aid, student flow and performance data, feedback information, and collaborative programs.

Segment refers to those institutions of like mission that are formally or informally identified as a system within the state, such as the two-year segment, state college segment, or university segment. In some states, the collectivity of independent institutions is viewed as a segment as well.

Intersegmental refers to two or more segments of a state's postsecondary education delivery system that plan and work together to resolve problems or issues, enter into mutual agreements, and coordinate programs.

I am indebted to the authors of the case studies included in Part II who represent both two- and four-year institutional officers as well as state agency officials. Acknowledgment and appreciation is also extended to the state officials who supplied documents and reports, were interviewed, or reviewd manuscript drafts of the report. Finally, thanks to Dr. Odom for the special section on state-level information systems, to John A. Pica, who served as research assistant during data collection, and to The Florida State University for its contribution to this project.

Louis W. Bender
Professor of Higher Education
The Florida State University

Executive Summary

Why is the transfer/articulation phenomenon misunderstood?

The nation's 50 states are dissimilar in size, geography, economy, demographics, and postsecondary education delivery systems, yet they are often described as the same in generalizations or national norms reported by researchers, policy-makers, and the national and local press. The transfer and articulation phenomenon is especially vulnerable to such fallacious reporting, which masks significant changes taking place in postsecondary education.

When higher education was viewed as a privilege, society accepted as appropriate the tradition of institutional autonomy and the central role of a faculty in determining the content and performance requirements of each degree program. Societal requirements and attitudes have changed since the 1960s, with higher education deemed a right as well as a requirement if our nation is to compete on a global basis. The primary players in articulation efforts before the 1960s were admissions officers and registrars. During the 1980s the primary players in articulation efforts were the transfer/articulation officers carrying out an ombudsman role. There is clear evidence that faculty-to-faculty groups will be the key players in the 1990s when states seriously address the problem of transfer and articulation.

What trends can be identified from an analysis of state policies?

The majority of community, technical, and junior college students who transfer apply to nearby baccalaureate institutions. The ideal, therefore, would be for such institutions to work together cooperatively to facilitate the movement and progress of such students. Failure of local educational policy-makers to work together voluntarily is apparent from the increased involvement of state legislatures in transfer/articulation matters. During 1989, the year this study was carried out, legislatures in at least 13 states considered bills or passed resolutions calling for action on transfer or articulation issues. The increased activity of legislatures over the past five years makes it apparent that the absence or failure of local voluntary articulation will be met by state-level mandatory policies.

A reading of state policies reveals an attitudinal posture worthy of note as well. Legislative resolutions dealing with transfer and articulation will, almost without exception, reflect a concern for the students' interest, sometimes to the detriment of traditions or values cherished by colleges and universities. In sharp contrast, the interests of institutions can often be found in policies developed by state coordinating agencies or voluntary institutional organizations.

What concerns have prompted increased state attention to transfer/articulation issues?

National calls for educational reform at the end of the 1970s resulted in many states mandating strengthened academic programs at both secondary and postsecondary levels. Concomitant demands for quality enhancement resulted in increased admissions requirements, reappraisal of general education requirements, and higher test scores and GPAs. Few states dedicated the resources needed to involve the faculty groups to align two-year college lower-division and four-year college upper-division programs.

Another major precursor of legislative concern is the compelling demographic changes in many states, which are prompting an expectation that colleges and universities will proactively reach out to underrepresented ethnic minority groups, assuring success to and opportunity for completion of the baccalaureate degree, the gateway to the professions. Since minority students disproportionately enroll in two-year colleges, there is an understandable desire by the public and its elected representatives that transfer and articulation result in increased representation of these groups in the upper-division baccalaureate institutions.

A third concern prompting state attention to transfer/articulation grows out of the burgeoning demand from applied associate degree graduates for baccalaureate opportunities. The rigor of many contemporary technical and paraprofessional programs requires students whose preparation would qualify them to pursue a baccalaureate degree. Applied associate degree programs in health, business, technologies, and service fields are finding that their graduates in increasing ratios are transferring to baccalaureate institutions.

What are the major areas among state transfer/articulation policies?

Nearly every state can certify it has a policy statement on transfer of credits for students moving from two-year to four-year institutions. Some are general and essentially affirm the autonomy of individual institutions in determining the conditions of transfer and credit awarded. On the other hand, some states have comprehensive policies that are intended to make transfer education a continuum from the secondary school level, to the two-year college level, to the four-year baccalaureate-degree level. Four major policies are:

State Articulation Agreements: Some articulation agreements call for recognition of the associate in arts degree as meeting the general education requirement for a baccalaureate degree program in any state-supported four-year institution. Other state agreements do not recognize the degree but specify a general education core which, when completed by the two-year college student, must be honored and accepted by the four-year institution. A few states have articulation agreements that call for transferability of all courses between public institutions in that state.

Mechanisms to facilitate course or program comparability can also be found, including common course numbering systems, course equivalency guides, and computer-aided course requisite and comparability information.

State-Level Transfer/Articulation Bodies: An important mechanism for bringing about collective and continuing efforts to improve transfer and articulation statewide is a representational body concerned with all aspects of articulation and transfer of students. In some

states these bodies are voluntary, while in an increasing number of other states such bodies are assigned responsibilities and authority by the legislature.

Transfer Student Services: An array of promising services and initiatives can be found in states that have made a commitment to making articulation work. Transfer/articulation officers are designated in both two-year and four-year institutions to promote transfer of students, to resolve grievances, and to improve faculty-to-faculty relations. Recruitment programs, orientation, counseling and advisement, and even financial aid for students transferring to upper-division institutions are examples of positive working relationships, as illustrated in the case studies included in this report.

Performance data and Feedback Systems: While the movement toward more centralized decision making at the state level has been rapid, state-level information systems needed to support such decision making have been slow to be developed. Only a few states have the capability of determining whether their policies are being implemented or ignored. A state-level information systems model by William R. Odom is included in this report.

What are some of the problems?

Institutional leadership is the key to successful transfer and articulation. Presidents must believe articulation activities will be in the best interest of the institution. There must be mutual respect and trust between institutions. As illustrated in several case studies in this report, the role of the president is central to making articulation work.

Similarly, the mechanics of transfer and the continuum of education can only come through faculty-to-faculty relationships. As faculty understand the different institutional missions, cultures, and resultant behaviors, respect for differences and trust in the integrity and colleagueship of counterparts can result in powerful and positive benefits for students and the institutions. Much remains to be done, however, before such an ideal is realized.

Accrediting Agencies: As illustrated in the case studies, accrediting agencies are sometimes contributing to barriers and misunderstandings between lower-division and upper-division faculties. Little has been done to document the scope and nature of such intrusion, however.

What recommendations grew out of this study?

The Congress

It is recommended that Congress study the injustice to federal financial aid recipients and the cost to taxpayers of state-supported institutions that require such recipients to repeat coursework at receiving institutions that already had been successfully completed at the sending institution. Using the constitutional "welfare clause" authority, Congress should enact legislation that would deny federal funds to states that do not correct such injustices.

It is also recommended that Congress determine whether regional or professional accrediting bodies violate the rights of federal financial aid recipients when imposing requirements that are essentially barriers to transfer and articulation between two-year and four-year programs. (Only one regional accrediting agency was identified in this study as treating transfer and articulation in the same manner as affirmative action policies.)

The AACJC

It is recommended that the AACJC Board of Directors promote the importance of the transfer function by a planned national program that systematically focuses upon critical areas of transfer and articulation. It is proposed that 1991 be designated the "Year of Transfer and Articulation" in order for activities to be highlighted and the nation to become involved. AACJC-affiliated councils could contribute to their regional and state activities throughout the year.

It is further recommended that three specific areas be addressed during the Year of Transfer, including: (1) the transfer function and opportunities for underrepresented ethnic minority groups; (2) the transfer function and career education programs; and (3) moving from articulation to collaboration programs.

It is recommended that AACJC institute a program of identifying and reporting exemplary transfer and articulation practices comparable to those included in Part II of this report.

The State Legislatures

It is recommended that state legislatures require statewide intersegmental and segmental reports on transfer and articulation activities to insure that legislative intent and priorities for fairness to students and taxpayers are achieved.

It is also recommended that legislatures provide incentives for appropriate transfer/articulation/collaboration efforts of two-year and four-year institutions for increasing the participation of underrepresented minority groups.

It is further recommended that legislatures provide funds for the development of comprehensive student data systems and insist upon all institutions sharing information among and between segments as well as with the legislature and the public.

Finally, it is recommended that state legislatures determine whether state financial aid programs are being violated by institutional practices or requirements of accrediting agencies that would require comparable corrective action as recommended for Congress at the national level.

PART I

State Articulation Policies: Myths and Realities

Louis W. Bender

No two states can be described as the same; yet, researchers, policy-makers, and the national and local press continue to promulgate national norms, generalizations, and claims that mislead or deceive because they assume uniformity. Size, geography, economy, and demographics, as well as dissimilar education governance structures, are important determiners of each state's postsecondary education delivery systems and their relationships. The individual differences of each state cannot be overemphasized. Three aspects of such differences illustrate the variety of contexts for transfer and articulation between lower-division and upper-division institutions.

Two-Year Institutions. The term community college often is the generic descriptor found in the popular press as well as publications of national organizations to refer to all types of public two-year institutions as though they are one. This simplistic technique is appropriate in many cases; however, it is quite misleading in regards to transfer and articulation issues, particularly when national norms or averages are reported. For example, New Hampshire has a system of six vocational/technical colleges, while Alabama has technical colleges, junior colleges, and community colleges making up its system of public two-year institutions. West Virginia has both community colleges and "community college components" of four-year state colleges, while Indiana has branch campuses of universities, vocational/technical colleges, and Vincennes University, a public two-year institution acknowledged as the only true "community college" in the state. Georgia and Tennessee have both junior colleges and technical institutes, while Connecticut, Minnesota, and Nebraska have community colleges and technical colleges. Ohio has branch campuses, community colleges, and technical colleges. It would be ludicrous to discuss transfer and articulation issues as though these various types of two-year institutions were a single model. Some of the policies discussed in this report are more relevant to one type than another type of two-year institution.

State System. Some states have consolidated governing boards responsible for all public postsecondary institutions, resulting in state policies that apply to all levels and types of institutions in the system. Georgia and Massachusetts are examples of such states under boards of regents, while comparable systems are governed as university systems in Alaska and Hawaii. At the other end of the continuum, a few states essentially have "non-systems," where local determination predominates as a result of little or no system authority at the state level (Pennsylvania, Vermont, and Maine are examples). The origin, nature, and scope of state policy will be quite different even though state legislatures may perceive they are calling for comparable policies.

State Traditions. An important difference needing amplification for this national study is the individual differences in traditions, values, and philosophy in relation to transfer and articulation efforts. Florida is credited by many authorities as exemplary in the comprehensiveness of its transfer and articulation policies and practices. Florida's universities and community colleges hold a keen sense of "system" even though the nine universities are under a single state-governing board of regents while local boards govern the 28 community colleges. A constitution-based State Board of Education (the only remaining colonial practice of its members being the governor and elected cabinet members) is responsible for all levels of education. Policies and procedures identified by community colleges or universities typically are approved or adopted by the state board for all public institutions. The Florida Legislature also plays a prominent role, making statutory provision for various transfer and articulation matters, which results in statewide implementation. This top to bottom authority/power configuration seems repulsive and unacceptably intrusive to many outside the state, yet to most Floridians it is workable and successful.

California, with quite similar transfer and articulation policies and practices, functions from a different perspective. The tradition and philosophy of voluntary participation and a bottom-to-top authority flow seems to be present in California, where the legislature is encouraged to fund incentives or pilot projects in fostering transfer and articulation practices. Part of the reason may be the fact that the University of California System derives its authority from the constitution (similar to the University of Michigan, the University of Minnesota, and Ohio State University) and therefore can be as autonomous or cooperative as it wants to be. As revealed later in this report, the legislature's attitude appears to be shifting toward prescriptiveness.

The California Postsecondary Education Commission plays a key role in maintaining public, legislative, and institutional visibility and attention on transfer and articulation by monitoring and reporting student flow patterns in annual reports, carrying out ongoing studies and analyses of transfer and articulation, and promoting the transfer function among the public segments and independent institutions of California. A quite different orientation can be seen in several Middle Atlantic and New England states where the historic traditions and values of private colleges and universities reflect a strong institutional autonomy ethic even among the public colleges and universities. There is little sense of "system" in such states as Pennsylvania, Virginia, Connecticut, and Vermont, where state planning and coordinating agencies are little more than advisory bodies.

Frederick C. Kintzer, a recognized authority on transfer and articulation, attempted to categorize articulation agreements among states based on the level or origin of authority. While helpful, such classification does not communicate the complexity of traditions. His typology lists Illinois as a state where articulation is legislatively mandated as is the case in Florida. Yet, Illinois is more like Michigan or North Carolina in that interinstitutional cooperation comes primarily from voluntary institutional participation in a statewide association rather than from governmental agencies. However, even the players vary; the Michigan Association of Collegiate Registrars and Admissions Officers plays a central role in transfer and articulation policy formulation in that state, while

representative faculty are utilized in North Carolina and Illinois.

As a consequence, it is necessary to examine each state within the context of its socio-political, economic, and educational characteristics. The issue of state-mandated as opposed to voluntary participation has many origins.

TRENDS AND ISSUES CONCERNING TRANSFER AND ARTICULATION

Historically, two- and four-year college transfer and articulation matters were primarily an institutional rather than a state concern. The tradition of institutional autonomy and the central role of a faculty in determining the content and performance requirements of each degree program were accepted by society as appropriate since higher education was viewed as "a privilege." The primary players in articulation efforts before the 1960s were admissions officers and registrars. Societal requirements and attitudes have changed since the 1960s, with higher education now being deemed "a right" and a requirement for an increasing portion of our population to develop its capacity to the fullest. During the 1980s the primary players were transfer/articulation officers carrying out an ombudsmanship role. In many states the evidence is clear that faculty-to-faculty groups will be the key players in the 1990s if transfer and articulation problems are to be seriously and successfully addressed.

Voluntary/Localized versus Mandated/Statewide

Research has verified that the majority of two-year college transfer students will apply to a nearby baccalaureate institution. The ideal, therefore, would be for such institutions to work together cooperatively to facilitate the movement of students from one institution to the other. As the case studies in Part II of this report demonstrate, such local articulation programs are possible and are successful. Unfortunately, there are too many cases in too many states where the public two-year and four-year institutions do not cooperate, sometimes actually being adversarial competitors.

The 1980s may well be described by history as the decade when transfer and articulation shifted, at least for public institutions, from the hands of local educational policy-makers to state-level public policy-makers. In 1989, the year this study was carried out, legislatures in 13 states considered bills or passed resolutions related to transfer and articulation. Perhaps more important for educators is the shift toward prescriptiveness in legislative mandates, thus communicating to faculties an intolerance of perceived abuses to the interest of the student and the taxpayer.

Illustrative of this trend is the Oregon legislative charge in House Bill 2913, which directed the State Board of Higher Education and State Board of Education jointly to develop general education requirements and agreements enabling associate of arts graduates of Oregon community colleges to meet lower-division general education requirements of four-year public institutions in that state. A subsequent charge from the legislature (July 10, 1987) required the joint committee of the two state boards to (1) propose a set of general education requirements for transfer students; (2) establish a common course numbering system for lower-division courses offered by institutions of the two segments; and (3) "propose systems and procedures that insure the enforceability of the agreements reached."

The 1989 General Assembly in Arkansas charged its State Board of Higher Education with developing a minimum general education core for baccalaureate degrees "which shall transfer freely among all state institutions." The 1989 Ohio Legislature required the Board of Regents in that state to establish a study commission:

> To make formal recommendations to the Governor and 118th General Assembly regarding implementation of a statewide student credit-hour transfer agreement to address the articulation problems associated with students transferring from state-assisted technical and community colleges to state-assisted universities (Section 5, S.B. No. 268).

The legislative sentiment toward requiring improved transfer and articulation can be seen in the language of a 1985 law of the Colorado Legislature when assigning responsibilities and authority to its new Commission on Higher Education. It reads

> The commission shall establish, after consultation with the governing boards of institutions, and enforce student transfer agreements between two-year and four-year institutions and among four-year institutions. Governing boards and institutions shall conform to such agreements and to commission policies relating to such agreements. Such transfer agreements shall include provisions under which institutions shall accept all credit hours of acceptable coursework for automatic transfer to another state-supported institution of higher education in Colorado. The Commission shall have final authority in resolving transfer disputes (Section 23-1-107, HB No. 1187).

Other state legislative budget amendments or resolutions signal an identifiable shift of authority for transfer of credits—which once solely resided with departmental faculties in the name of academic integrity and institutional autonomy—to state-level bodies and agencies.

Why are legislatures taking action that is contrary to the tradition of institutional autonomy and voluntary articulation arrangements? Analysis of testimony of legislative hearings and legislative committee reports reveals a perception in many states that students are being treated unfairly when transferring from one institution to another. The general public and their elected representatives perceive publicly sponsored or supported postsecondary institutions as a system of interdependent and complementary elements that fit together as a whole, not as different, competing elements. Education is viewed as a process, not institutional forms or types. As a consequence, legislative testimony often is directed toward the unfairness to transfer students and to taxpayers when both must pay the price of repeating coursework already successfully completed or when students are required to take more courses than the native students in the same degree program.

Institution-Interest versus Student-Interest

A reading of state policies reveals an attitudinal posture in some cases that offers clues, if not insights. Legislative resolutions dealing with transfer and articulation will, almost without exception, reflect a concern for the student's interest, sometimes to the detriment of traditions or values cherished by colleges and universities. In sharp contrast, the interest of institutions can often be found in the wording of statements or the composition of state

articulation groups. The North Carolina Joint Committee on College Transfer Students, sponsored by the North Carolina Association of Colleges and Universities and used by the university system as the articulation policy making forum, declares

> These statewide guidelines for collegiate articulation in North Carolina are unique among the states in America. Prepared voluntarily for voluntary use by representatives of colleges and universities which carefully guard and value their academic independence, the guidelines represent a recognition of the importance of common reference points which autonomous institutions may use in considering the admission of and the granting of credit to transfer students. The development and general acceptance of the guidelines stand as a major achievement in academic cooperation (*Guidelines for Transfer,* p. 2).

The policy of The University of Wisconsin System (a governing board) was an exception that deserves to be quoted. Its undergraduate transfer policy includes the following declaration in the introduction:

> Mobility is a common human phenomenon. This is true among students in higher education. For several reasons—a change in major, a family move, the economic and familial necessity of attending college close to home—students are frequently faced with the need to obtain their collegiate education from two or more institutions. In response to these type of needs, The University of Wisconsin System welcomes transfer students from other accredited colleges and universities and from institutions within the system. Thus, a conscientious effort has been made by the UW System to create a student-oriented transfer process. The foremost goal is a policy that provides a strong focus toward serving students and strives to treat continuing and transfer students in the same way on program issues (e.g., degree requirements and program changes and notification) [June, 1989].

Another example of institutional-interest in contrast to student-interest can be found in the purposes and actions of state-level intersegmental bodies, whether called councils, committees, or boards. Representatives from the various segments typically make up the membership of these bodies, which are expected to address problems and issues of transfer and articulation whether identified by students or institutions. When baccalaureate representation is greater than two-year representation, institutional interest will supersede student interest. Examination of agendas and findings of such bodies often reveals interesting contrasts. Some are empowered only to provide advisory findings while others are empowered with binding authority. Usually, products of the advisory groups maintain or champion the institutional prerogative, while intersegmental groups with binding authority typically evidence student-interest priorities. Furthermore, agendas are quite different for those states where such boards are primarily intended to address grievances and problem issues in sharp contrast to those states where the body proactively quests to facilitate improved articulation.

PRECURSORS OF LEGISLATIVE CONCERN

What has caused governors and legislatures to become so interested in transfer and articulation? Editorials and testimony reviewed during

this study revealed three different sources. First, *A Nation at Risk* and similar national reports calling for educational reform have resulted in many state legislatures mandating the strengthening of academic programs at both secondary and postsecondary levels. Requirements for English, math, science, and foreign language in high school college-preparatory programs have resulted in additional admissions requirements for the freshman class of public four-year institutions in many states. In many cases, general education requirements have been modified or increased by the same institutions. As a consequence, problems, real or imagined, with transfer students have been identified. In some cases, the root of the problem has been communications between institutions, while in other cases major philosophical differences have surfaced.

A second precursor of legislative concern is the compelling demographic changes in many states, prompting an expectation that colleges and universities will proactively reach out to underrepresented ethnic minority groups and assure access to and opportunity for completion of the baccalaureate degree, the gateway to the professions. Since minority groups disproportionately enroll in two-year institutions, there is an understandable desire by the public and its elected representatives that transfer and articulation result in increased representation of these groups in the upper-division baccalaureate institutions. For example, as early as 1974, the California Legislature passed a resolution calling upon the public segments of higher education to assure minority student initiatives. The Ford Foundation has also played a significant role in promoting attention and action in improved transfer opportunities for ethnic minority students, which has influenced many states to revisit their transfer and articulation practices.

A third and increasingly visible pressure grows out of the demand of graduates of applied associate degree programs for baccalaureate opportunities. The rigor of many contemporary non-transfer technical programs requires students whose preparation would qualify them to pursue a baccalaureate degree. Graduates of applied associate degree programs in health, business, technologies, and service fields are increasingly transferring to baccalaureate institutions. The national press has seldom reported on this phenomenon. Perhaps it is due to the fact that little is known about this population or their problems in the transfer and articulation process, although several states are beginning to act on this serious matter.

MAJOR STATE POLICIES AND PRACTICES

Nearly every state can certify it has a policy statement on transfer of credit for students moving from two-year to four-year institutions. Some are general and essentially affirm the autonomy of individual institutions in determining the conditions for the transfer and award of credit. Pennsylvania and New Hampshire are states with such policies. An official in Ohio observed that the Board of Regents articulation/transfer policy "guidelines" had been on the books since 1977 but had never been implemented. As previously observed, the Ohio General Assembly included a provision in its 1989 biennial budget bill calling for action on articulation problems associated with student transfer. The New Mexico Legislature passed similar legislation in 1988. Concern for assuring equal access, equality of treatment of students, and enhanced quality are reflected in the prescriptive nature of state legislatures that previously had been tolerant toward concepts of institutional autonomy and self-determination.

State Articulation Agreements

Associate Degree Recognition: The associate in arts degree (AA) is the universally accepted credential for programs designed to prepare students for upper-division baccalaureate study. In spite of AACJC's 1984 associate degree policy statement, which was intended to obtain adoption of common associate degree designations to facilitate uniformity and standardized meanings, considerable variation still exists. Many states designate the AA as the degree for those with a general education foundation and a social science emphasis, while the associate in science degree (AS) denotes programs with math and science emphasis. Florida uses the AA for both such programs. The associate in science in Florida is the applied degree, which most states recognize by awarding the associate in applied science degree (AAS). It is understandable that confusion often exists over the meaning and relevance of the various designations. The Missouri Coordinating Board for Higher Education promulgated guidelines for student transfer and articulation in 1987 that succinctly and clearly define the nature and purpose of each degree designation. These guidelines could assist many states in their articulation efforts.

General Education Requirement: Concern for a prescribed course of study insuring that all graduates possess a common core of college-level skills and knowledge is at the heart of the articulation debate in many states. The argument usually focuses on who defines the program. One of the most active states in focusing upon the general education transfer curriculum, California experienced a significant change in 1989 when the University of California segment for the first time delegated to the community colleges the responsibility for designating which courses meet the requirements for a new transfer core curriculum adopted by UC, the California State University, and the California Community Colleges. Georgia, Oklahoma, and Tennessee prescribe the basic general education core that must be honored by the upper-division institution. Oklahoma also recognizes the associate degree:

> If a student has completed an associate of science or associate of arts degree, the lower-division general education requirement of the baccalaureate degree shall be the responsibility of the institution awarding the associate degree, providing the general education requirements specified herein are met. If, for any reason, a student has not completed an associate degree program prior to his or her transfer to another institution, the general education requirements shall become the responsibility of the receiving institution. However, the receiving institution will recognize general education credit for all transfer courses in which a reasonable equivalency of discipline or course content exists, with the courses specified as part of general education at the receiving institution, provided that there is an appropriate correspondence between the associate degree and the baccalaureate degree being sought (State Regents for Higher Education, March 1987).

The number of credit hours required as part of the general education core vary from a minimum of 16 credit hours in Iowa to 37 credit hours in Oklahoma.

Three models of general education programs are described by the Missouri guidelines, including competency-based programs, topical or thematic programs, or distributional programs.

The preponderance of general education requirements in state articulation agreements would be of the distributional program model.

Course Credit: Delaware and Rhode Island transfer policies call for transferability of all courses between the public institutions of the states. A systematic review of courses by appropriate faculty of course content and proficiency requirements is used for development of a matrix of course credit for all programs offered by the institutions.

Course Comparability

Some legislatures have sought the equal and fair treatment of transfer students by calling for determination and promulgation of course equivalencies, which requires faculty participation.

Common Course Designation Systems: Florida probably has one of the most comprehensive and operationally efficient common course numbering and designation systems. Groups of faculty from the nine universities and 28 community colleges worked as task force groups throughout system development in the 1970s. During the '80s, faculty groups worked to keep the system (which is fully computerized and online) up to date and current. A problem confronting this activity has been the occasional external pressure of some national accrediting bodies insisting that all professional instruction be at the junior and senior levels. Faculty teams working on the course numbering system have been forced to make compromises on the assignment of numbers, which has resulted in transfer students having to repeat courses completed as introductory coursework at the community college. The American Assembly of Colleges and Schools of Business was identified as one of the accrediting agencies that has created such a problem. (The New Jersey Institute of Technology case study in Part II provides further illustration.) The Florida common course numbering system has been expanded to include vocational/occupational courses and has been made available to independent colleges and universities, thus further facilitating transfer of community college students to upper-division institutions.

Nevada has developed a common course-level numbering system for all system institutions to facilitate student advisement and registration. All community college transfer courses follow a statewide course designation with equivalent university lower-division courses. The system also includes numbering for developmental courses, which are non-transferable.

In Colorado, common course designators for academic transfer courses were developed during the 1989–90 fiscal year by the Colorado Community College and Occupational Education System. The initial goal was to promote commonality across the two-year college system in order to assure more accurate content of courses when providing transfer information to the four-year institutions. A similar strategy is being carried out in Alabama under the leadership of the chancellor of the two-year college system.

A quite different approach is used in California, where course articulation is not predicated on an effort to determine "equivalency," but rather upon "comparability." The California Articulation Number (CAN) System does not attempt to have common course designation and numbering; instead, it requires an institution to designate those identically numbered CAN courses that are acceptable "in lieu of" its own designated courses. Articulation

agreements to accept one course "in lieu of" another are usually based on content covered during a comparable period and require a written agreement between two or more institutions to accept and use a specific course completed on the sending campus to meet a course requirement at the receiving campus. Each campus retains and uses its own course number, prefix, and title and then adds the appropriate prefix and CAN when it has qualified the course through written articulation agreements with at least four other institutions, including one each from the two upper-division segments.

Course Equivalency Guides: Use of course equivalency guides to assist in the advisement of students and the transfer process is fairly common. In some states legislative action requires all institutions to maintain updated equivalency guides as a result of legislative action, while voluntary efforts are carried out intersegmentally or within segments in other states. Determination of equivalency practices varies and often offers evidence of faculty or institution attitudes. While joint participation of two-year and four-year faculties is a growing trend, in a few states the prerogative for equivalency determination is the sole province of departmental faculties of upper-division institutions, who carry out a judge and jury function by ruling on course syllabi submitted to the baccalaureate institution by the two-year colleges and apparently without benefit of conferral or collaboration with faculty of the two-year college.

State-Level Transfer/Articulation Bodies

An important mechanism for bringing about collective and continuing efforts to improve transfer and articulation statewide is the provision for a representational body concerned with all aspects of articulation and transfer of students and with positive articulated practices among the institutions. Such bodies vary in nomenclature, authority, and title among states. The Articulation Council of California, while state-supported, is voluntary, with membership drawn from the various segments of the public system as well as from the private sector. Its agreements are non-binding but have been effective as guidelines in most cases.

Similar voluntary coordinating groups responsible for articulation grievance referral beyond the campus level can be found in Arkansas, Maryland, Massachusetts, and Washington. In North Carolina, the voluntary Joint Committee on College Transfer Students, sponsored by the North Carolina Association of Colleges and Universities, includes both the public and independent sectors.

More legislative authority is vested in such coordinating bodies in Florida, Illinois, New Jersey, New York, and Colorado. Florida's Articulation Coordinating Committee is appointed by the Commissioner of Education and its recommendations can become directives under the rule making authority of the state board or through legislative action. Membership of such groups traditionally has been confined to institutional representatives; however, New Jersey's Transfer Advisory Board includes public representatives as well.

Comprehensive Student Data and Information Systems

Several states have developed computerized student academic advisement systems to aid in counseling and guidance. Florida's on-line advisement and articulation system (SOLAR) provides students with an academic plan according

to their selected major and upper-division institution. The system is used in the high schools for advisement also. A similar microcomputer-supported system in California is known by the acronym ASSIST (Articulation System Stimulating Interinstitutional Student Transfer). It provides information on transfer admission requirements, course recognition and comparability, as well as information on support services available at each institution. Some states, including Delaware, Nevada, and Rhode Island, have developed manual rather than computer-assisted systems.

Few states maintain the kind of comprehensive student data bases to monitor student flow and performance that would aid in improving transfer and articulation. Information on applications, transfer admission, credits recognized or rejected, or on transfer student performance, persistence, and academic status are often unavailable and sometimes known but not shared. A separate discussion of this topic and proposed ideal model developed by William Odom, deputy executive director of the Florida Division of Community Colleges, concludes Part I of this report.

ETHNIC MINORITY GROUPS AND THE TRANSFER FUNCTION

A California legislative resolution in 1974 (ACR 151, Hughes) called for higher education institutions to reach out to underrepresented ethnic minority groups and identified transfer and articulation as mechanisms for assuring access and opportunity for a multicultural citizenry. In the early 1980s the Ford Foundation sponsored several research projects on access and transfer of minorities to the upper-division baccalaureate programs as well as a series of community college-based transfer opportunity program projects. A 1987 AACJC publication, *Transfer: Making It Work*, described the critical areas addressed by the Transfer Opportunity Project and listed other philanthropic foundation minority initiatives.

Regrettably, too few states have encouraged articulated collaborative efforts between two- and four-year institutions in increasing the number of underrepresented minorities who are baccalaureate-degree seekers. Incentive and outreach programs seldom encourage baccalaureate institutions to focus on two-year colleges as a separate level for motivational, bridge, and guarantee programs for minorities. As a result, the secondary school often is the focus of both the two-year and baccalaureate institutions in a competitive rather than collaborative mode. Most state incentive programs are directed toward segmental rather than intersegmental efforts.

New Jersey has instituted a Challenge Grant Program with priorities given to ethnic minority student initiatives involving identification, motivation, and articulated programs by the two- and four-year institutions. Several of these initiatives have involved 2 + 2 transfer agreements. Both the State University of New York and the City University of New York systems have grant programs to encourage two- and four-year consortia projects that promote programs and services to underrepresented ethnic minority groups. California has also provided funds that could be used collaboratively to serve ethnic minority students.

Arizona, Florida, Illinois, and New York have scholarship programs that reserve awards for minority transfer students. Arizona and Florida also provide outreach program funding for both intersegmental and segmental work with

secondary schools in minority identification and recruitment programs. Several 2 + 2 + 2 agreements have "intent" language to emphasize underrepresented minority groups.

Studies on minority community college enrollments, transfer rates, and baccalaureate completion rates have increased state policy-makers' attention to underrepresentation. Illinois has been especially active in promoting the concept of minority student baccalaureate achievement through transfer. The Illinois Board of Higher Education included the following strategies in a 1989 working paper:

To provide encouragement of, information about, and assistance in transferring, baccalaureate institutions should

- Assign baccalaureate-major advisers to feeder community and junior colleges with high proportions of minority students to advise prospective minority transfer students regularly on course requirements.
- Adopt the concepts contained in the "Articulation Compact."
- Offer admission and financial aid awards and provide transfer credit evaluations to transfer students early and in the same communication.
- Provide a special orientation program, designed with input by previous transfers, for community and junior college minority transfer students beginning at the community/junior college before transfer and continuing at the baccalaureate institution after transfer.
- Establish summer bridge or transition programs to orient and accustom entering minority transfer students (and their parents/spouses) to the institution's academic expectations and campus life.
- Establish a mentorship program for minority transfer students with faculty members or more experienced peers.
- Build student networks by creating smaller communities of identification within each college to serve as a home base for counseling, advising, tutoring, and meetings of study groups, clubs, and organizations.

To assure appropriate academic standards, baccalaureate institutions should

- Provide annual, detailed information on the progress of minority and other transfer students to feeder community and junior colleges.

To assure equal treatment of transfer and native students and to accommodate nontraditional minority students, baccalaureate institutions should

- Hold registration for transfer students on feeder community and junior college campuses or bring community and junior college transfer students to the campus to register at the same time as native continuing students register.
- Allocate sufficient residence hall space for community and junior college transfers, including single parents, and encourage on-campus living the first term after transfer.
- Provide child care services for children of students during all hours that classes are held on campus.

Dorothy Knoell, a preeminent authority on transfer and articulation, has proposed a new conceptualization of articulation as "collaboration" in the two-year and baccalaureate segment for recognizing joint cooperative responsibilities to achieve critical social goals. Collaborative efforts in correcting underrepresentation of ethnic minority groups represent a significant and worthy goal. (The Los Rios case study in Part II provides an excellent illustration of initiatives directed toward underrepresented groups.)

ARTICULATION OF CAREER EDUCATION PROGRAMS

Maine's six vocational technical institutes were designated "colleges" during 1989, thus joining New Hampshire, Minnesota, Wisconsin, and several other states that have recognized the increased rigor and academic background needed for training programs for the paraprofessional, mid-management, and technician middle manpower spectrum. As the programs have been upgraded, pressure has developed for degree-granting authority. Some states authorize such institutions to award the associate in specialized technology (AST) or the associate in specialized business (ASB) degrees, which typically include not less than 20 percent of coursework in general education and 75 or 80 percent of the work in the area of specialization and related coursework. Other institutions have increased the general education component to approximately 40 percent, typically found in the associate of applied science degree programs. In many states the occupational applied programs are expanding the general education component. As graduates of such programs have sought opportunity for baccalaureate degrees, transfer and articulation problems have developed. (The New Jersey Institute of Technology case study in Part II provides an in-depth illustration of articulated applied programs.)

In 1986 the California Legislature called on its Postsecondary Planning Commission to study and make recommendations on 2 + 2 + 2 articulated career education programs. The Texas Legislature in 1987 assigned responsibility for the former vocational technical programs to the State Coordinating Board, charging it with incorporating such programs under the Texas Modified Core Curriculum policies. And the Indiana General Assembly directed the State Commission for Higher Education in 1988 to study the compliance of the assembly's mandate that all state universities and the vocational technical college system enter into articulation agreements to facilitate transfer of credits for courses in the associate degree programs, to be effective in 1989–90.

Oregon transfer policies recognize up to 24 credit hours from vocational technical courses as "general electives" and promote 2 + 2 program articulation in the occupational fields. The Iowa Board of Regents policy recognizes up to 16 hours of vocational courses for transfer. Nevada's common course numbering system provides for occupational courses in the applied associate degree programs, the same as in Florida.

MAKING ARTICULATION WORK

A review of all state policies and practices reveals a diversity of programs and services that, if operative, would result in two-year college students' unimpeded movement through upper-division institutions with full recognition and credit for all successfully completed coursework and with their assmiliation into the student

body with the least possible dislocation or trauma. Furthermore, the ideal relationship of two-year and four-year institutions would be collaborative rather than articulated efforts. Recommendations of the Joint Committee for Review of the Master Plan for Higher Education of the California Legislature in its March 1989 report could serve as model policies for every state. When declaring the transfer function as the central institutional priority of all segments of higher education, the Joint Committee recommended

- The state shall guarantee by statute a place in postsecondary education for all qualified California students who wish to attend. All students who successfully complete the transfer curriculum at the community college level shall be guaranteed by statute future enrollment as upper-division students at the University of California or at the California State University. The grade point average required of all transfer students shall be the same within each segment regardless of their original eligibility, and all such students shall be treated equally with continuing students for admission to the programs and majors of their choice.

- Eligible students who have applied for freshman admission to campuses of the University of California or the California State University and who are not admitted to the campus or college of their first choice may choose to pursue their lower-division coursework at a designated community college. These students are guaranteed upper-division admission to the university campus and college of their first choice if they successfully complete the transfer curriculum, including a prescribed course of study and requisite grade point average, at the designated community college.

- Every community college district shall develop formal transfer agreements guaranteeing upper-division enrollment in specific majors for community college transfer students, regardless of initial eligibility, with at least three campuses of the University of California and five campuses of the California State University, such agreements to be phased in over a period not to exceed January 1, 1992. The community college districts are encouraged to develop such agreements with as many campuses of the two university segments as feasible. The Board of Regents of the University of California and the Board of Trustees of the California State University shall insure that all campuses of their respective segments participate in the program. Such agreements shall specify the prescribed course of study and requisite grade point averages which shall guarantee entrance to the program of the student's choice. The community college districts and the university campuses shall develop coordinated counseling services so as to facilitate these transfer agreement systems.

- The governing boards of each of the segments are strongly encouraged and expected to develop programs of concurrent enrollment and concurrent student membership across segmental lines, so that community college transfer students are afforded the rights and privileges of matriculating university students.

- The Board of Regents of the University of California and the Board of Trustees of the

California State University shall ensure that individual university campus enrollment plans include adequate upper-division places for community college transfer students in all undergraduate colleges and that each undergraduate college on each campus participates in developing articulation and transfer agreements with community colleges.

- The University of California and the California State University shall require students who are not regularly eligible for admission as first-year students (other than those admitted under special provisions) to complete the intersegmentally developed transfer core curriculum or its equivalent at a community college. University admissions offices can make exception to this rule under compelling circumstances. Those students who do complete the required courses with the requisite grade point average shall then be assured access to the California State University or to the University of California as transfer students with full degree credit for that coursework.

- The Board of Regents of the University of California and the Board of Trustees of the California State University shall declare as policy that students from historically underrepresented groups shall be afforded priority in transfer admissions decisions and shall design policies intended to facilitate their success in achieving transfer.

- The Board of Governors of the California Community Colleges, the Regents of the University of California, and the Trustees of the California State University, with appropriate consultation with the academic senates of the respective segments, shall jointly develop, maintain, and disseminate a common core curriculum in lower-division general education for the purposes of transfer. Such a core curriculum is to be designed and agreed to by January 1, 1990, with full implementation on the following academic year.

- The Board of Governors of the California Community Colleges shall have the authority and responsibility to guarantee that all community college students have access to courses that meet the lower-division baccalaureate degree requirements of the California public universities. The Board of Governors, with the cooperation of the Regents of the University of California and the Trustees of the California State University, shall insure that all students are clearly and fully informed as to which community college courses and units are transferable and that requirements in the community colleges correspond to the requirements for, entry to, and success in, upper-division university coursework.

- The governing boards of the University of California, the California State University, the California Community Colleges, and the Association of Independent California Colleges and Universities, and the State Board of Education shall be accountable for the implementation of formal system-wide articulation agreements and comparable courses numbering systems within and among the segments.

- Every community college campus shall maintain transfer counseling centers or other counseling services intended to counsel, advise, and monitor the progress of community college transfer students.

- The governing boards of each of the segments are strongly encouraged and expected to develop new programs of outreach, recruitment, and cooperation between and among the three segments of public higher education, to encourage and facilitate the successful transfer of students between the community colleges and the universities.

- The Governor and Legislature shall provide the financial support necessary for the community colleges and the two public university segments to offer comprehensive transfer programs and supporting services essential to an effective transfer function.

- The chairs of the governing boards of the three public segments of higher education shall present annual comprehensive reports to the Governor and Legislature on the status of transfer policies and programs and transfer rates, indicating outstanding problems of or obstacles to effective intersegmental articulation and coordination.

- The California Postsecondary Education Commission shall advise the Governor and the Legislature biennially as to: (1) the performance of all three public segments of California postsecondary education with respect to the goals and objectives of these recommendations regarding transfer; (2) the effective transfer rates between the different segments; (3) the adequacy of state support for these programs; and (4) further recommendations regarding the operation of these programs.

- The Governor and the Legislature shall monitor the success of the segments in achieving their targeted enrollment levels and in implementing these reforms. A substantial failure to implement reform, to achieve the 60/40 ratio by the designated dates, or to significantly improve the transfer rate of historically underrepresented groups, shall precipitate legislative hearings to show cause why specific budget allocations should not be withheld pending full implementation of these goals and reforms.

An array of policies, practices, and mechanisms identified during this study are intended to facilitate a student's mobility from one institution to another in achieving his or her educational goal while at the same time respecting the responsibility of each institution in determining the nature and form of programs to achieve its mission and reason for being. The following outline of articulation programs and practices illustrates the levels and areas of effort taking place within different states at this time.

ARTICULATION PROGRAMS AND PRACTICES IDENTIFIED DURING THE NATIONAL ARTICULATION STUDY

I. State Level
  Legislative
    Mandates
    Budget Provisos
    Resolutions
  State Planning and Coordinating Agencies
    Master Plan Policy/Recommendations
    Transfer/Articulation Studies
    Transfer Student Flow and Performance Reports
    Sponsor State Articulation Working Groups
    Leveling and Other Comparability/Equivalency Initiatives
    Minority Student Incentive Policies

- Program Review Articulation Requirements
- Sponsor Conferences and Workshops

Intersegmental Coordinating and Policy Bodies
- Articulate Core/General Education Requirements
- Grievance Resolution
- Promote Program Articulation

Segmental Boards and Agencies
- Segmental Common Course/Core Requirements
- Segmental Data and Information Systems
- Segmental Common Calendars and Reporting Formats
- Segmental Minimum Admissions Requirements
- Segmental Limited Access Program Policies
- Promote Intersegmental Programs

Statewide Voluntary Professional Groups Concerned with Transfer/Articulation
- Presidents, Deans' Councils (Both Inter- and Intrasegmental)
- Transfer/Articulation Officers
- Faculty Representatives (Including Disciplines)
- Professional Associations

II. Regional Activities
- Professional Voluntary Groupings
- Regional Coordinating Councils
- Regional Meetings and Workshops
- Regional Consortia Projects

III. Institutional

Admissions
- Upper-division Entry Comparable to Freshman Services
- Joint (Guaranteed) Admissions
- Orientation and Preregistration Services
- Placement Testing
- Common/Electronic Transcripts
- Prompt Transcript Assessment and Reporting
- Financial Aid Provisions

Transfer Student Services
- Recruitment
- Counseling/Advising (Manual or Computer-Assisted)
- Transfer/Articulation Officers
- Transfer Centers
- Common Catalogs
- Visits/College Fairs

Curriculum
- Faculty-to-Faculty Articulation Activities
- Articulated 2 + 2 Agreements
- Articulated Acceleration
  - Dual Credit
  - Advanced Placement
  - CLEP
  - Credit by Exam
  - Concurrent Enrollment

Other Articulation Activities
- Joint Programs
- Joint Use of Facilities
- Cooperative Outreach Programs
- Collaborative Activities

In the final analysis, however, making transfer and articulation work is dependent upon the willingness, commitment, and attitudes of people at the institutional level. People must know each other, communicate with each other, respect each other, trust each other, and work together. President-to-president and faculty-to-faculty relationships have resulted in clearer understanding of the different institutional missions and institutional cultures making up a state's system of postsecondary education. Two-year college faculty have come to realize university faculty members do care about students and are committed to teaching and learning. University faculty simultaneously have

discovered that their two-year college counterparts are current in their disciplines and are committed to scholarship. A shared commitment to helping students, the common central purpose of all sincere faculty, can and does come from joint articulation efforts.

Institutional leaders, especially chief executive officers, set the direction and tone by serving transfer students and working with other institutions. (See the University of Central Florida/Valencia Community College and Texas case studies in Part II for illustrations.)

The Baccalaureate View: Baccalaureate interests in the transfer/articulation debate are typically directed toward quality. Some question the quality of preparation provided by community colleges as well as the quality of performance and persistence of their product. Differences among two-year colleges and differences in the characteristics of their entering students make most state two-year college systems vulnerable to question, skepticism, and doubt. The nature and quality of faculty and staff of the colleges and the emphasis placed on the transfer function in comparison to the occupational programs, developmental programs, and business/industry services compound baccalaureate institutions' concerns.

The ability of two-year institutions to verify lower-division collegiate-level courses together with standards of rigor are important in satisfying the baccalaureate view. Admittedly, some of the ultra-conservative baccalaureate traditionalists will not be convinced; however, the public and its legislative representatives will be.

Two-Year College View: Concern that transfer students are treated the same as native students, coupled with resentment of heavy-handed, condescending attitudes from upper-division institutions, are often found in testimony and comments of two-year college representatives in the debate. Anecdotal evidence is offered for each but often lacks verification.

Two-year colleges simply do not know enough about themselves, their programs, the experiences of their transfer students, and the resultant need for self-corrective action. Two-year colleges in each state must make a commitment to improving systemwide information about transfer and articulation as well as be willing to address internal weaknesses.

State Policy-Maker View: There is a growing frustration with reported transfer student inequities and injustices resulting from institutional competition, dissension, and uncooperativeness. It would appear that legislatures, reflecting public sentiment, are becoming increasingly intolerant of traditions, structures, and attitudes of academe that place institution interest above the importance and worth of the student.

The long-term response to this view will be a movement from articulation practices to collaborative practices between and among the public institutions in each state.

RECOMMENDATIONS

The Congress

It is recommended that Congress study the injustice to federal financial aid recipients and the cost to taxpayers of state-supported institutions that require such recipients to repeat coursework at receiving institutions that already had been successfully completed at the sending institution. Using the constitutional "welfare

clause" authority, Congress should enact legislation that would deny federal funds to states that do not correct such injustices.

It is also recommended that Congress determine whether regional or professional accrediting bodies violate the rights of federal financial aid recipients when imposing requirements that are essentially barriers to transfer and articulation between two-year and four-year programs. (Only one regional accrediting agency was identified in this study as treating transfer and articulation in the same manner as affirmative action policies.)

The AACJC

It is recommended that the AACJC Board of Directors promote the importance of the transfer function by a planned national program that systematically focuses upon critical areas of transfer and articulation. It is proposed that 1991 be designated the "Year of Transfer and Articulation" in order for activities to be highlighted and the nation to become involved. AACJC-affiliated councils could contribute to their regional and state activities throughout the year.

It is further recommended that three specific areas be addressed during the Year of Transfer, including: (1) the transfer function and opportunities for underrepresented ethnic minority groups; (2) the transfer function and career education programs; and (3) moving from articulation to collaboration programs.

It is recommended that AACJC institute a program of identifying and reporting exemplary transfer and articulation practices comparable to those included in Part II of this report.

The State Legislatures

It is recommended that state legislatures require statewide intersegmental and segmental reports on transfer and articulation activities to insure that legislative intent and priorities for fairness to students and taxpayers are achieved.

It is also recommended that legislatures provide incentives for appropriate transfer/articulation/collaboration efforts of two-year and four-year institutions for increasing the participation of underrepresented minority groups.

It is further recommended that legislatures provide funds for the development of comprehensive student data systems and insist upon all institutions sharing information among and between segments as well as with the legislature and the public.

Finally, it is recommended that state legislatures determine whether state financial aid programs are being violated by institutional practices or requirements of accrediting agencies that would require comparable corrective action as recommended for Congress at the national level.

SUGGESTED READINGS

Listings of all policy, study, and procedures sources for each state used in this study cannot be made due to the limitation of space and the variation in citations. Many states provided xeroxed copies of materials related to the study. Selected publications are referenced below based on direct value to this study or judged worthy of use by states seeking helpful information on transfer and articulation.

Handbook for Articulation Task Forces 1985–86. Irene Wright, Facilitator, Academic Program Articulation Steering Committee. State of Arizona.

Transfer Policies of Arkansas Colleges and Universities. Arkansas Transfer Advisory Committee. January, 1988.

California Faces . . . California's Future: Education for Citizenship in a Multicultural Democracy. The Final Report of the Joint Committee for Review of the Master Plan for Higher Education. March, 1989.

Handbook of California Articulation Policies and Procedures. Intersegmental Coordinating Council. 1989.

Strengthening Transfer and Articulation Policies and Practices in California's Colleges and Universities: Progress Since 1985 and Suggestions for the Future. California Postsecondary Education Commission. 1987.

Progress in Implementing the Recommendations of the Commission's 1987 Report on Strengthening Transfer and Articulation. California Postsecondary Education Commission. 1988.

Transfer and Articulation with Four-Year Colleges and Universities. A Report by the Board of Governors of California Community Colleges. March 9–10, 1989.

Articulating Career Education Programs from High School through Community College to the Baccalaureate Degree. A Report to the Governor, Legislature, and Educational Community in Response to Assembly Bill 3639 (Chapter 1138, Statutes of 1986). California Postsecondary Education Commission. December 14, 1987.

Reaffirming California's Commitment to Transfer: Recommendations for Aiding Student Transfer from the California Community Colleges to the California State University and the University of California. California Postsecondary Education Commission. 1985.

Transfer, Articulation, and Collaboration: Twenty-Five Years Later. A Report of a Research Project Funded by the Ford Foundation. By Dorothy M. Knoell. American Association of Community and Junior Colleges, 1990.

Transfer Information System Feasibility Study. Colorado Commission on Higher Education. November, 1988.

Articulation Study: The Role of Florida Community Colleges in Articulation. Florida State Board of Community Colleges Task Force on Articulation. September, 1988.

Transfer Study: A Five-Year Study of Students Transferring from Illinois Two-Year Colleges to Illinois Senior Colleges/Universities in the Fall of 1979. Illinois Community College Board by Authority of the State of Illinois. May, 1986.

Performance Audit Report: Transferring Courses to Regents' Universities. A Report to the Legislative Post Audit Committee by the Legislative Division of Post Audit. State of Kansas. January, 1986.

Student Transfers from Community Colleges to Baccalaureate Institutions in Michigan.

Preliminary Report by Maureen T. Neal, Community College Services Unit, Higher Education Management Services, prepared for the Michigan State Board of Education. February, 1988.

Credit Transfer: Guidelines for Student Transfer and Articulation Among Missouri Colleges and Universities. Missouri Coordinating Board for Higher Education. October, 1987.

Articulation and Transfer: A Compendium of University Initiatives. By Dympna Bowles, Director of Articulation, and Cerisa Mitchell, Associate Director of Articulation, Office of Academic Affairs. The City University of New York. 1987.

Report of the University Articulation Task Forces. Office of Academic Affairs. The City University of New York. 1988.

Guidelines for Transfer: Recommendations of the Joint Committee on College Transfer Students. University of North Carolina. 1987.

Recommended Transfer Programs Guide 1987–1989: Update. Oregon State System of Higher Education.

South Dakota Postsecondary Collegiate Articulation Committee Report. July, 1989.

A Study of the Role of Community Colleges in the Achievement of the Bachelor's Degree in Washington State. Washington State Board for Community College Education. January, 1989.

Policy on Inter-College Transfer and Articulation Among Washington Public Colleges and Universities. State of Washington Higher Education Coordinating Board. February, 1986.

Intercollege Relations Commission Information Booklet. A Commission of the Washington Council on High School/College Relations. 1986.

Transfer Information System Project Definition. The University of Wisconsin System, January, 1989.

Articulation and State-Level Information Systems: A Necessary Marriage

William R. Odom

One of the most significant trends in postsecondary education over the past two decades has been the increased involvement of state governments in the development of policies and regulations affecting public institutions. Access and articulation policies have been at the center of much of this attention. A national study of articulation by the California Postsecondary Education Commission, *Transfer, Articulation, and Collaboration Twenty-Five Years Later* (1987), reached the following conclusion:

> State legislatures enact bills and resolutions expressing intent with respect to the treatment of transfer students and courses, with implementation to be carried out by state commissions or coordinating boards for higher education by the adoption of statewide policies, regulations, and agreements (p. 57).

With the increase in state involvement comes a need for more and better information with which to address these policies, regulations, and agreements. As pointed out by Bragg (1989), student tracking systems are in their early stages of development in some states; however, college staff need to be more involved at the state level in establishing program guidelines, defining data element definitions, and developing reporting formats.

Unfortunately, the systematic collection, storage, retrieval, analysis, and dissemination of information at the state level has not been a high priority of legislative budgets and thus has lagged behind the movement toward more centralized decision making. This creates a serious dilemma—centralized decision making without centralized information. Although many states have recognized this problem, few have taken positive steps to solve it. Another finding of the California Postsecondary Education Commission study was stated as follows:

> A great deal of progress has been made by colleges and universities since the 1960s in the use of electronic computers for the collection, storage, and analysis of transfer student data and related course and program information. Still databases at the state and systemwide levels are not established for the most part in a way that facilitates student tracking from institution to institution or through programs to the attainment of a baccalaureate degree. Nor

> are databases with information about courses and programs usually organized in a way that aids articulation between and among institutions. . .(p.54).

Technology, in terms of systems design concepts, database systems, networking architecture, and hardware, is not a barrier to implementing state-level information systems. A major reason states have not made more progress in developing these comprehensive information systems is related to the multi-agency approach that must be taken to design these large, complex systems. In most states responsibility for policy making and implementation is fragmented among various boards, panels, commissions, and committees. As a result of this organization, a great deal of coordination, communication, and negotiation between these agencies is required to facilitate information systems design that ensures that databases can be shared or interfaced. Another reason for the reluctance of states to move toward centralized information systems is the fear of usurping local institutional management decision making authority. With highly centralized detail information, state agencies could become more involved in the day-to-day operational decisions of the institutions or, at the least, second-guess the local management. Thirdly, with the size and complexity of these systems, there is a significant investment related to their full implementation. State legislatures are reluctant to provide appropriations to further centralize policy and decision making even though they are a partner in causing this shift to the state level.

Despite these barriers, many states are moving toward the development of comprehensive state-level information systems. Most states recognize that state-level information systems must address the strategic objectives of the agencies, rather than be limited to automation of operational functions.

This chapter proposes a general approach to developing a state-level information system to support policy and decision-makers concerned with addressing the various aspects of articulation. Further, it emphasizes the need to be able to track students through the entire postsecondary education system. Articulation, in the context of this paper, is a set of policies, regulations, and practices that impacts the movement of students through a state system of postsecondary education. These policies are not simply related to articulation, but interrelate with numerous other state policies such as governance, structure, access, and minority recruitment.

ARTICULATION POLICY AND INFORMATION REQUIREMENTS

State-level policy making in most states is very complex since it usually involves several agencies in the executive branch, as well as legislative committees and staff. To develop an information system to address articulation policies and issues, a multi-agency, strategic information planning approach is necessary. One agency cannot develop the various information systems required to address all of the articulation policies and issues. Since the decision structure is different in most states, the information system planning approach proposed in this chapter is based on the state-level policies and issues related to articulation. From an analysis of these policies, the information requirements of the systems can be inferred and data needs specifically defined. Another step in the systems design process, which is not discussed here, would be to overlay the results of this

analysis onto the various agency responsibilities and strategic plans. This step is necessary to define specific agency responsibilities for implementing the information systems needed.

It is unlikely that a state would undertake the development of information systems simply to address articulation issues; rather this would be just one set of the critical policy areas that would be included in a comprehensive systems planning effort. However, this chapter is limited to presenting an approach that addresses the specific subset of policies related to articulation, rather than detailing a comprehensive strategic information planning process.

The following provides an example of the policies, information requirements, and uses of information that should be analyzed to identify the systems requirements for the student databases. Furthermore, this approach is based on a student flow or tracking model that identifies the information requirements of students entering postsecondary education institutions, moving through the institutions, and exiting the institutions.

Objective 1—To provide baseline information on students entering the institutions.

Policies:	**Information Requirements:**	**Use of Information:**
Access policies	Educational history entering the system	Profiling of entering student characteristics
Admissions policies	Pre-college experiences (employment, military, etc.)	Evaluating minority recruitment activities
Assessment testing policies	Personal, family, demographic information	Providing feedback information to previous educational institutions (high schools)
Remediation/placement policies	Test scores on assessment and placement tests	Analyzing placement practices
Minority recruitment policies	Student educational goals (degree objectives)	Identifying at-risk students
Curriculum programming policies	Personal goals (non-degree objectives)	Evaluating counseling and advisement practices
Counseling and advisement policies		Analyzing need for and use of financial aid
		Analyzing program demand by students

Objective 2—To provide a tracking capability for students as they move through the institutions.

Progress assessment policies	Comprehensive educational record	Tracking student progress
Grading policies	Non-educational record	Analyzing degree program progress and switching characteristics
Retention policies	Progress assessment record	
Remediation policies		

Objective 2—Continued

Policies:	Information Requirements:	Use of Information:
Counseling and advisement policies	Counseling and advisement information	Evaluating placement strategies and policies
Financial aid policies	Financial aid information	Identifying program completion rates
Program review policies		Identifying problem areas for a particular group of students
Staff development policies		Profiling at-risk students
		Analyzing drop-out intervention strategies
		Evaluating assessment testing activities and policies
		Conducting program review
		Determining staff development needs
		Providing feedback to previous schools (high schools and colleges)

Objective 3—to provide follow-up capability for students exiting the institutions.

Credentialing policies	Exit interview information	Analyzing students' subsequent educational progress
Exit assessment policies	Program completion information	Evaluating program effectiveness (program review)
Placement policies	Educational record at subsequent institutions	Determining job placement rates
Admissions policies (next educational level)	Employment information	Determining employer and student satisfaction with educational experience
	Follow-up information from students	Analyzing student program objectives and completion rates
		Analyzing completion rates of students placed in remedial courses/programs
		Following up on drop-outs (i.e. students not completing programs)

Another database that is needed to address state-level articulation issues is one that contains data about the educational programs offered at each postsecondary institution. A common program coding structure should be developed so that similar programs offered at the various institutions can be identified. A single database such as this will provide the capability of generating an institution/program matrix for the postsecondary educational system in the state. The program and student databases can be interfaced using the program identification code and the student program objective. The records contained in the program databases should include the following types of data for each program:

Program identification code
Institutional codes
Program description
Program objectives
Relationships with other programs
Entry requirements
Prerequisites
Course requirements for completion
Credential awarded
Completion rates
Accreditation information
Licensing requirements of graduates
Placement rates

The use of this database in the student flow model, and specifically articulation policy analyses, are numerous. Conducting program reviews, analyzing minority recruitment and retention, providing feedback to schools previously attended, analyzing completion and placement rates, and conducting student follow-up and drop-out studies are a few of the uses of the information that can be obtained from this database.

A third database needed at the state level is one that contains the specific courses offered at each institution. A common course identification structure should be an integral part of the information system so that similar courses offered at the various institutions can be identified. The course database can be interfaced with the student databases by using the course data element in the student unit record since each course a student takes is identified in this record. The course and program databases can be interfaced by using the common course prefix and number in the program database. The course records contain the following types of data:

Common course prefix and number
Title
Description
Credit hours
Program relationship
Level (freshman, sophomore, etc.)
Institution codes

The information that can be provided in the course database is essential to the development and analysis of articulation policies. The commonality and transferability of courses should not be contested on a case-by-case basis, rather it should be a matter of state policy. Such a system provides the maximum protection to the students as they move between the institutions in a state, and it should be an integral part of the state articulation agreement or policy.

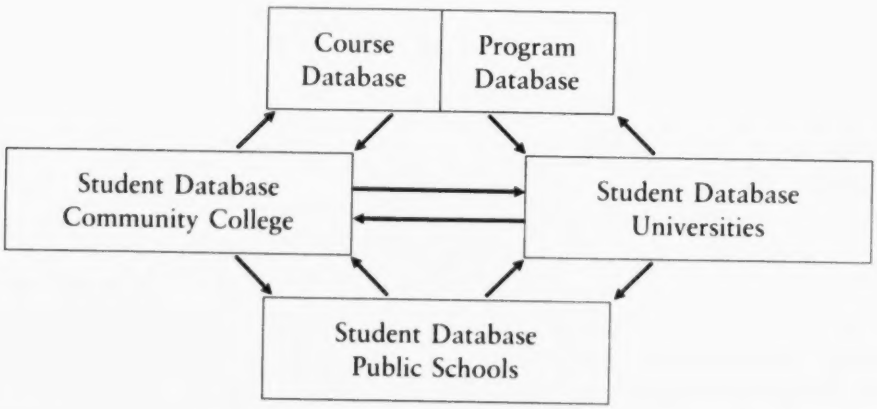
STATE-LEVEL INFORMATION SYSTEMS TO SUPPORT ARTICULATION

State-level information systems that can support articulation activities will usually be composed of several subsystems and their respective databases. The essential core of these subsystems, which are required to construct

student flow models, contains the student, program, and course databases. Developing and maintaining these databases will usually be the responsibility of several different state-level governing or coordinating agencies that are responsible for the various education delivery components, e.g., public schools (kindergarten–12th grade), community colleges, four-year colleges, and universities. Seldom are all of the components under, or within, one agency. In order to have the inter-agency cooperation required to integrate these several databases, it is necessary to develop an information system planning structure that includes all of the boards or agencies that have a vested interest in the final system's design. This usually requires a different type of planning framework than typically exists at the state level. Such a framework must consider how autonomous agencies can structure themselves to plan systems and to share information across organizational boundaries. Furthermore, the results of these planning activities may require changes in technology, fiscal mechanisms to allocate and share costs, modification of database structures and definitions, and cross-participation in governance processes (Davies and Levine, 1988).

Whatever the cost and effort, it is necessary to integrate these subsystems so that data can be transferred quickly and efficiently between databases. Integration provides for student transcripts to be sent from one institution to another through an electronic mail system. Students being counseled at a community college can access by terminal the program requirements for entry into upper-level programs at a university, and they can compare their current academic record with these requirements. Reports can be sent to individual high schools on how their students performed at the post-secondary level, and universities can report back to colleges in a similar manner. Analyses can be accomplished to determine how well minority community college transfer students perform in various programs into which they move at a university. These are just a few examples of how the integrated state-level information systems support articulation activities. Figure 1 illustrates the interrelationships of these subsystems' databases.

Figure 1
Information Systems Relationships



To ensure integration of the individual subsystems, agreements must be reached on standards and conventions related to database design and structure. It is this need to forge such agreements that stretches the planning capabilities of the state agencies involved since there is an obvious give and take, or consensus process, that must take place. For example, to equate courses that are offered at different institutions, and sometimes at different levels, requires the involvement of faculty experts in the various disciplines. The establishment of equivalent numbers for equivalent courses is not only a complex analytical task, but one that requires a considerable amount of negotiation. This is particularly true when guaranteed transferability of common courses is involved.

Interagency planning in the development and review of data element dictionaries is essential to the integrative process. There are common data elements being collected in the several student databases. It is imperative that these common elements be defined in the same way and that coding conventions are the same so that data from the subsystems can be shared, combined, and aggregated. For example, there should be common coding conventions for such data elements as ethnic group, institution code, degree awarded, and course grades. A common student identification code should be used in each of the student databases to ensure that standard accessing and interfacing methods can be developed. The program structure that is the framework of the program database should be common for all postsecondary programs regardless of the type or level of institution. This will provide a basis for analyzing articulation policies and practices on a programmatic basis, as well as for constructing student flow models that can follow students through the institutions and programs in the state postsecondary education system.

Another important component of a state-level information system is an electronic data communications network that links all of the public education entities to the data processing resources serving public education in a state. Such a network will allow computer resource sharing and data transfer among educational institutions at all levels throughout the state. There are four basic goals of such a network:

- to provide equal access to computing resources for the educational entities in the state;
- to reduce the data burden on faculty and administrators;
- to rapidly and effectively exchange information within the public education system; and
- to increase the accuracy and reliability of data used at the institutional and state levels (Florida Department of Education, 1989).

While a network is not absolutely necessary to have a comprehensive state-level information system, the current state of the technology and the need to address the aforementioned goals makes it advantageous to include this component in the interagency planning effort. Since such a network cuts across the organizational boundaries of several state agencies and involves the various levels of educational delivery, it is necessary to have broad involvement in determining the specific functions and required architecture of the facility.

CONCLUSIONS

There is little doubt that state-level involvement in policy determination and evaluation will increase in the next few years. Of particular

interest will be the policies that make assurances to the student, as the consumer of education, that there is a coordinated and articulated public education system in the state. These assurances will be in the form of articulation policies and practices to protect the rights of students moving through the system. In order to develop these policies and to evaluate their implementation success, there is the need for state-level information systems. Although these information systems are complex and costly to develop, states will recognize their value and support their continued development. A finding of the California Postsecondary Education Commission study was that the technology is now available to improve the compilation and delivery of comprehensive information to transfer students, as well as to track and report on their performance, but it continues to be underutilized in most states and institutions of higher education (California Postsecondary Education Commission, 1987). The development of multiorganizational state-level information systems over the next decade will begin to remedy this problem.

States must recognize the need to structure a new and different planning approach that supports, or even requires, interagency cooperation in the development of information systems. This planning structure must insure that the various information systems, which have henceforth been the responsibility of one agency, can be integrated into a multiagency system that supports articulation and other state policy areas.

At the center of this planning process are the standards and conventions that must be agreed upon to insure the integration of the student, program, and course databases. A statewide electronic data communications network will facilitate and enhance the development of the state-level information systems.

REFERENCES

Bragg, A.K. "Beyond the College: State Policy Impact on Student Tracking Systems." In T.H. Bers (Ed.), *Using Student Tracking Systems Effectively. New Directions for Community Colleges,* No. 66. San Francisco: Jossey-Bass, Summer 1989.

Brush, B. and Hartwig, A. "Planning and Implementing A Multi-Institutional, Statewide Student Information System." *Cause/Effect,* 1987, *10*(5), 26–33.

California Postsecondary Education Commission. *Transfer, Articulation, and Collaboration Twenty-Five Years Later.* Sacramento: California Postsecondary Education Commission, 1987. Draft.

Davies, T.R., and Levine, E. *Multi-organizational Strategic Information Systems (MOSIS) in the Public Sector.* National Governors Association Second Joint Conference on Integrating Data. Washington, D.C.: National Governors Association, 1988.

Florida Department of Education. *Florida Information Resource Network; An Introduction to FIRN.* Tallahassee: Florida Department of Education, 1989.

Florida State Board of Community Colleges. *The Role of Florida Community Colleges in Articulation (1988).* Tallahassee: Florida State Board of Community Colleges, September, 1988.

Western Interstate Commission on Higher Education. *Improving the Articulation/Transfer Process Between Two- and Four-Year Institutions.* Boulder, CO: Western Interstate Commission on Higher Education, 1985.

PART II

New Jersey Institute of Technology and Transfer Relations

Gary Thomas

While higher education in New Jersey dates back to colonial times (Princeton University was founded in 1746, and Rutgers, the State University of New Jersey was founded in 1766), a system of higher education that provides education for a modern technological society is relatively recent. In part, this is the result of private and public institutional assessment of society's educational needs and offering programs to meet those needs. But more importantly, New Jersey simply allowed (or encouraged) its citizens to go out of state where better educational opportunities existed.

In 1965 the president of Princeton University, Robert F. Goheen, chair[illegible] blue ribbon committee on higher education that issued a report, *A Call to Action*. In the year of this report, 60,000 New Jersey students left the state, while only 30,000 of its students could be accommodated in the public sector of higher education in New Jersey.

In 1967 the Board of Higher Education and Department of Higher Education were created. In 1970 the first master plan for higher education was issued and the state's philosophy of higher education established. Since the issuance of the first plan for higher education, three others have been completed. A system of higher education has taken shape that goes a long way toward meeting the state's goal of providing increased and diverse opportunities for educating students to their maximum potential.

In the late 1960s the present community college system began to take shape. The community/county college system in New Jersey is largely an open admissions system with the dual mission of providing training in skills proficiency and two-year career-oriented or transfer programs. Nearly all the community colleges prepare students in a wide variety of disciplines for transfer to four-year colleges and universities. The first two years of engineering and engineering technology programs are offered by most.

In 1983 the Board of Higher Education issued a policy, "Full Faith in Credit," that required the public four-year colleges and universities to accept the credits earned at the community college as having the same value as those taught at the receiving college. Further, this policy requires the state colleges to accept the general education portion of the work completed at the

community college as satisfying their own general education requirement. Finally, as long as a transfer student remains in the same major, the state colleges can require no more than 68 additional credits. This policy applies strictly to the state colleges; however, the state-supported universities are also expected to follow it as closely as possible. While there has been some movement toward the acceptance of this policy, in many cases it is simply ignored, especially at the state-supported universities.

New Jersey Institute of Technology, founded nearly 100 years earlier, began cooperating with the newly created community colleges from their beginning. NJIT, long known as Newark College of Engineering, began as essentially a technician training school. Early in the 20th century, engineering programs were added to the technician certificate programs, and the college began its evolution into a technological university. Throughout its history, however, the technician training program remained as part of its programmatic offerings. The technician certificate programs reached peak enrollment in 1967.

NJIT's original technician training programs have essentially ceased to exist now that the community colleges offer technician training programs. The current NJIT certificate programs have changed to emphasize post-baccalaureate and pre-baccalaureate certificates in fields such as computer-aided design and drafting, where NJIT has a better equipment base than the nearby community colleges.

In 1971 NJIT joined the community colleges in the creation of an engineering technology program that became a model of cooperation, characterizing many of the programs that followed. In the early part of the second half of the 20th century, there was growing national recognition of the need for a new educational program to fall somewhere between the traditional engineering program, which many people believed had gotten too theoretical, and the technician programs. NJIT created the baccalaureate program in engineering technology in 1971 for evening students and in 1972 for day students. It was agreed that NJIT would not offer the first two years of the program; rather, it would rely on the community colleges to do that, and it would offer only the upper division of the program.

NJIT's policy of cooperation and support for the community college system was partly the result of the philosophical commitment of the faculty and the administration to this newly created system of higher education in New Jersey and partly a recognition of self-interest. The epicenter of the 1967 Newark riots was only three blocks from the campus. The impact of the riots and the urban decline before and after them continues to affect enrollment, especially at the undergraduate level. This, coupled with the demographic decline of the number of students graduating from high school and the fact that New Jersey remains the largest exporter of undergraduate students in the nation has made a necessity of virtue. NJIT supports the philosophy of the state goals for the system of higher education and chooses to use its scarce resources to develop and support programs where it has a competitive advantage over other schools. It tries to anticipate changes in higher education and develop programs that respond to those changes. And, in the belief that perceived improvement in quality of the system of higher education will ultimately benefit NJIT directly, it promotes policies that improve the entire system. NJIT has developed

the following specific programs to implement its policy on transfer relations.

ADMISSIONS

Students graduating from community colleges are admitted into NJIT's programs in three ways: students apply, have their records reviewed and, if appropriate, are admitted; students complete a course-by-course articulated program with satisfactory performance and are admitted; and increasingly, students are admitted through signed joint admissions agreements between the community college and NJIT.

Traditional Admissions

While there are special problems associated with articulating technological programs, there are also some advantages. The primary difficulty is associated with professional accreditations. The advantages are associated with the highly structural nature of the curriculum.

Where baccalaureate accrediting agencies exist, special care is needed in transfer relations because the baccalaureate-granting institution is responsible for the entire educational program whether or not individual courses are offered by another college. There are a wide variety of such programs that are accredited at the baccalaureate level (e.g. nursing, business, architecture, computer science, engineering, and engineering technology). Each of these programs has special characteristics and problems, but many of the transfer difficulties encountered are common.

Some states require that senior colleges and universities accept all students who graduate from an accredited community college. However, most baccalaureate-accrediting agencies require that the institution granting the degree be responsible for all courses taken in the program, whether or not they are taken at the degree-granting institution. Hence, even if graduates of community colleges are accepted automatically into an institution, they might need to repeat many courses if those courses do not fit the requirements of the four-year degree-granting institution's curriculum. Further, even if the courses taken at a community college have descriptions similar to the corresponding ones at the senior institution, if the level and subject matter covered are not the same as those required by the degree-granting institution, students may not be prepared for the advanced courses in the curriculum. This is especially true of mathematics and science preparation for engineering curricula, since most of the professional courses are taken at the upper-division level.

Further, students sometimes experience problems with prerequisites, although their difficulties are not immediately obvious. Students may be able to pass one or two courses in a sequence (perhaps with reduced performance from that which they could achieve with proper preparation) before their difficulty is obvious. Without continuing discussion between the engineering faculty and the mathematics and science faculties (even within the same institution) students may lack the necessary skills to undertake certain upper-division courses.

In management curricula, the major accrediting agency has strict requirements on the place in the curricula a particular course must be offered. In many instances, the maturity of the students is as important as the material covered. Even though a student may be able to pass a management course, if he or she has not completed a basic business course, such as economics, the

student will have an incomplete understanding of the material covered.

For successful transfer relations to exist, there must be ongoing discussion between the faculties of the schools who prepare students for graduation. The faculty members of community colleges need to know how well their graduates do in specific senior institution courses. They need to discuss the impact of potential curriculum changes that will assist students at one college and how those changes impact students who do not transfer to that senior institution. Through such discussions confidence can be established between institutions and modifications made in both curricula and advisement systems, thus assuring that students have a reasonable chance of success.

Course Credit

Of nearly equal importance to establishing course equivalencies is making certain that students receive timely information concerning the credit that will be awarded for those courses so that students can accept or reject an offer of admission. Even though NJIT has course-by-course articulation agreements with nearly all of the community colleges in New Jersey, few students move smoothly through a curriculum, whether or not it is articulated to another program. NJIT has appointed a full-time person in the registrar's office who is responsible for the awarding of transfer credit.

Even though students move from school to school more today than in the past, clear, detailed articulation agreements between schools significantly help students transfer. Over the past 20 years NJIT has established curriculum-by-curriculum articulation agreements with nearly all of the community colleges in the state. These agreements call for semi-annual meetings to discuss the success of transfer students in the various transfer programs at NJIT.

Dual Admissions and Student Recruitment

Over the past several years, NJIT has begun working out dual admissions agreements, in which a student is admitted simultaneously to a community college and NJIT. Such students need not "apply" to NJIT again after the completion of their program at the community college. They simply notify NJIT of their program completion, forward their transcripts to NJIT, and begin attending classes on the NJIT campus. While the actual conditions of "transfer" to NJIT are essentially the same as those that prevail under a traditional articulation agreement, one might ask What are the advantages to the community college and NJIT? While knowing the number of students who will likely attend is advantageous to planning, the most important advantage to both is the ability to jointly market programs to student populations.

NJIT actively recruited transfer students prior to the creation of the community college system and will continue to do so in the future. The methods used included advertising in local newspapers (as well as in the student newspapers of the community colleges), holding open house for potential transfer students, and having admissions officers and faculty visit community college campuses to discuss transfer with students. With the growth of articulation agreements, NJIT often gained access (at no charge) to the literature distributed by the community college to its potential student pool. Sometimes information about the articulated program was part of a mailing to every household in the county

or service region. In nearly every case, the articulated programs were described in the community college's catalog. In addition, NJIT literature about itself and the articulated programs was made available to the admissions officers at the community college, who in turn gave it to potentially interested students.

With the joint admissions agreements, however, mutually supportive and coordinated recruitment can take place. NJIT supplies the names and addresses of students in the community college service area who are unlikely to be admitted to NJIT as freshmen but who have potential for success in their chosen field once certain deficiencies are removed. Often visits to high schools in the region are coordinated with the admissions staff of the community college. In this way, additional options can be explained to potential students.

These dual admissions programs have significantly increased the class size of particular programs at the community college. The results have been so encouraging that other colleges have approached NJIT to work out similar arrangements. The basic reason for success seems to be that students like the certainty of ultimate admission into a baccalaureate program. Through such a guarantee, a larger number of the state's citizens understand the logic of the higher education system that came rather late to New Jersey.

Of course, availability of places within the junior class at NJIT is essential for such a program to succeed. For this reason no agreements are completed for programs where availability cannot be assured. Currently only admission to the architecture program is limited due to space limitations.

STRENGTHENING RELATIONS WITH COMMUNITY COLLEGES

Student recruitment and admissions activities allow for the development of trust that is necessary for many other activities to take place. These include cooperative education programs, upper-division courses offered on the campus of the community college, and the formation of consortia of colleges to address student learning needs in specific fields.

Cooperative Education

NJIT offers a large cooperative educational program with many options on both the graduate and undergraduate levels. One of the most popular undergraduate cooperative education programs involves two work experiences during the junior year. For this program to be open to transfer students, there must be placement activity while these students are still enrolled in their community colleges. For such a program to have maximum effect, the co-op student must be placed into a job that takes advantage of the education the student has received during the first two years of college. Further, it is typical for students to be "paired" on the job, that is, two students with approximately the same background and level of skills are identified by an employer to alternately fill a position. In this way the corporation has a more uniform-sized work force. Co-op work placements require that students be identified, interviewed, and scheduled for their work/study experiences. The school arranging the placement must know the students' educational background in detail as well as their educational and professional plans after completing their studies. For community college students to have an equal chance to participate with students who start as freshmen at the senior college, they

must be interviewed while they are second-year students at the community college. Further, their preparation must be equivalent to that given to students who begin at the senior institution and may be paired with them. The co-op director at the senior institution must work with the potential co-op students at the community college. Such activities require a high level of confidence between the corresponding administrations of the two institutions.

During academic year 1986–1987, NJIT began planning for the implementation of a cooperative education program that placed students from community colleges in work experiences prior to their first class at NJIT. Engineering technology was chosen as the first program to have students placed into co-op employment under this program. There were several reasons for deciding that the transfer cooperative education program should begin with the engineering technology program. The most important of these reasons was that the vast majority of NJIT's engineering technology students are evening part-time students (that is they work during the day in a local industry and attend college at night). Hence, they are already engaged in "work/study" arrangements. A cooperative education assignment might provide a work experience more closely related to their field of study. Further, previously no engineering technology student has been eligible for NJIT's cooperative education program because of its 2 + 2 nature and the NJIT co-op model that required the completion of NJIT credit prior to placement in a work experience.

Part-time students usually require at least twice as long a period of time to complete their course of study as full-time students (i.e. four years to complete the two-year upper division). Further, informal work/study arrangements often result in students working on a job that is not associated with their course of study, but is simply a means to pay for their education. A formal cooperative education program would allow students to complete the upper-division coursework in three years rather than in two. Further, since the work experience is directly related to the student's future career, cooperative education would provide a more meaningful educational experience. Since engineering technology is more closely attuned to current engineering practice than is an engineering program, cooperative education for such a program was ideal.

Work on the program began with a conference held at NJIT to which several people from each community college were invited. The conference began with several presentations on the nature of cooperative education and the mechanics of the program at NJIT. The advantages of the program to the community college students were stressed. Finally, separate workshops to discuss concerns were held at the various institutions for academic deans, placement officers, and financial aid officers.

Off-Campus Courses

In the early 1980s, NJIT began to expand the number of locations at which courses were offered. Prior to 1975 all courses offered by NJIT were given on the Newark campus. In the latter part of the decade, NJIT began to offer graduate-level computer science programs in western and southern New Jersey, in response to the growing number of professionals working in suburban research and development corporations who wanted advanced study. To ease the transition to the Newark campus for engineering technology students, in 1980 undergraduate courses were added in the southern New Jersey location.

There are now 11 sites in New Jersey (all but one co-located with a community college). In addition to some selected graduate programs, upper-division engineering and engineering technology courses are offered at these sites. These programs meet a demonstrated need of students enrolled in community college programs. All of NJIT's engineering programs require courses in the major during the sophomore year; hence, students who transfer to NJIT without these courses fall behind students who enter NJIT as freshmen. For example, NJIT's electrical engineering program requires students who start at NJIT to take two courses in electrical engineering during their sophomore year of study. Some of the community colleges either do not have an appropriate faculty member to teach these courses or need this faculty member to teach other courses in the community college's program. Further, the community college program must prepare students to transfer to a wide variety of upper-division engineering colleges. As a result, the courses needed by NJIT's students may not be taught. However, with the support and urging of community colleges, NJIT's own faculty began to offer the necessary courses at the community colleges during the evening hours. In this way students in the second year of an engineering transfer program who wished to transfer to NJIT could take the courses without additional commuting costs.

Consortia

During the past several years, there has been a growing recognition at NJIT and at many of the community colleges that program-oriented consortia could provide benefits to both the county colleges and NJIT. For example, in 1984 NJIT began a program in computer-integrated manufacturing. This program addresses the rapid decline in the production of goods within the United States during the past decade. Advances in computer technology have created conditions where parts may be designed and analyzed on high resolution video terminals. After the designer is satisfied with the part, the manufacturing process (for example, cutting tool strokes) may be designed at the terminal. Once the design and the manufacturing process are complete, the computer code that will control the movement of the machine producing the physical object is passed over a network to the factory floor where the product is manufactured. The physical object may be tested, redesigned if necessary, packaged, and shipped. As the product is used, data concerning its reliability may be used to modify the design in subsequent versions of the product.

In order for students to take part in the dramatic changes this technology is causing in the way factories and businesses operate, expensive equipment must be purchased and faculty with appropriate expertise must be recruited. The state of New Jersey agreed to provide NJIT with the resources necessary to introduce advanced manufacturing into its curriculum if arrangements were made to provide community colleges with ways to participate. In 1985 NJIT convened a meeting of the presidents of 10 community colleges located within commuting distance of NJIT's Newark campus. Through this and other meetings, it was agreed that a "factory of the future" would be created at NJIT and that community college faculty would have access to the factory to teach the project and design courses they could not teach on their campus. If the community college did not have the faculty with appropriate specializations necessary to teach these courses, NJIT's faculty would teach the courses. At this point all the associated community colleges have

asked to use the factory and NJIT's faculty to teach the project courses that require students to synthesize the knowledge that they have gained during the first two years. Hence, the students enrolled in the community college programs will be instructed in part by NJIT's faculty on its campus.

After the first three years of consortium operation, a review process was begun. Several representatives from community colleges suggested that a consortium for all engineering technology programs offered by New Jersey colleges would be useful. As a result of this suggestion, NJIT has begun the organization of an engineering technology consortium consisting of NJIT and all of the community colleges that offer engineering technology programs. This unusual consortium may provide an arena for discussing educational improvements in engineering technology education. Similar consortia in other programmatic areas could improve the education offered by a distributed system of higher education.

STUDENT OUTCOMES

Careful analysis of student learning in any program is necessary to improve the quality of the educational experience. This is true whether or not a portion of a program is offered by another institution. For example, in engineering education the mathematics sequence taken by students is critical to their success. Not only must appropriate material be covered in the sequence, but students must learn how to apply that knowledge to engineering problems. If it appears that students are experiencing difficulty with a particular portion of the engineering curriculum, the faculty member involved in teaching it can discuss the problems with the faculty of other departments to find better ways of preparing the students for the material they must cover. On the surface it might appear that such discussions of courses taught at another institution would be more difficult; however, in practice there appears to be little difference.

Each year NJIT provides the various community colleges with information on the performance of NJIT students who transferred from their college. Data provided consists of information on the average performance of all students who transferred during a given year, as well as a record of the performance of individual students.

One of the more useful measures of student performance of both individual students and groups is the cumulative grade point average (CUM). If there is a large enough group of students transferring into a program from an individual college, the CUM is also a useful measure for understanding the preparation of transfer students from the transfer institution. NJIT uses the ratio of the average CUM earned by a group of students who transfer to NJIT in a given year to the average CUM that the group transferred to NJIT. If the ratio is near to one, it is assumed that the lower-division preparation for the particular program is adequate for the work in the upper division. For example, in a recent transfer class of over 50 students from a particular community college, the CUM ratio was 0.98 (that is, the group had an average CUM of 2.8 from the community college and earned an average CUM of 2.73 in their first year at NJIT).

This single ratio, of course, gives only a narrow view of transfer class preparation. For example, experience has shown that students with a CUM of 3.5 (out of a total of 4.0) or better

perform very well at NJIT regardless of the institution from which they transfer. Admissions personnel at all levels and in various places in the nation can corroborate that students who have excellent performance in their high school, community college, or undergraduate school are very likely to perform well in their next academic experience. Hence, it is even more important to be able to predict the performance of more nearly average students than it is to predict the performance of exceptional students. By understanding the performance of average students, it is sometimes easier to understand the preparation provided by specific courses and sequences of courses.

In its analysis of performance, NJIT prepares a matrix that displays the CUM earned at the community college versus the CUM earned at NJIT. The CUM earned at each institution is divided into cells that are 0.5 CUM points wide. Then the number of students who transferred in a given period is entered into the appropriate cell. For example, in the transfer class illustrated in the last paragraph, six students whose CUM from the community college was between 2.00 and 2.49 had CUMs at NJIT between 2.00 and 2.49. If there were perfect correlation between community college performance and performance at NJIT, all of the student CUMs would lie along the diagonal of the matrix (i.e. their CUM at NJIT would be the same as that earned at the community college). This does not happen, of course, because student performance often changes with level of study and because of the events that occur in the lives of individual students. However, there tends to be a correlation between community college performance and NJIT performance.

In addition to these studies of average performance of relatively large numbers of students, NJIT provides the community college with information on the performance of each transfer student. This information includes the number of credits transferred from the community college, the number of credits completed at NJIT, the CUM of the student, and the current major of the student.

Maintenance of a dialog between community college faculty and the NJIT faculty is difficult. It is not, however, significantly more difficult than maintaining a dialog between the various faculties within the same institution. For example, it is typical for the faculty in the science and mathematics departments to answer to a different dean than the engineering, architecture, or management departments. Each of these departments has its own measure of professional success. Each offers service courses that must satisfy the needs of more than one college. Further, the demands of accrediting agencies are different. While the logistics of getting together may be easier when the faculties of separate programs are on the same campus, the differences in demands on the faculties are similar even when they are separated by significant amounts of travel time.

CONCLUSION

Clearly, transfer arrangements make sense for all concerned: the student who may not have taken high school seriously gets another chance at a college education; the state is able to provide students with opportunities to receive high quality college education at a reduced total cost; and the colleges are able to differentiate their missions without closing their doors to students who would otherwise be excluded from universities for financial reasons or for deficiencies in preparation. However, at least in the case of the technological professions, the special

restrictions of the senior colleges should be kept in mind in developing transfer arrangements.

First, accreditation is beneficial to most curricula. However, accreditation reviews can cause senior colleges to change their curricula abruptly and in ways that can appear arbitrary to community colleges. Second, most accrediting agencies require senior institutions to assume responsibility for the entire curriculum that the student follows whether or not the student takes all the courses at the same institution. Third, since success in technological education depends in large measure on the material normally covered in the lower division, senior institutions have legitimate concerns for what is taught in individual courses.

There are many reasons why students may wish to attend four-year institutions directly out of high school; however, there are growing numbers of students who do not. For these students, especially for students in the technologies, it is important to provide transfer opportunities that offer high quality education with natural breaks that allow for the possibility of career reorientation.

While NJIT has never been alone within the state of New Jersey in its support and initiative in facilitating transfer of students from community colleges, for more than a decade it had an advantage over some of the universities in the state in obtaining transfer students, at least in part because of its initiatives in support of the higher education system. In recent years other state-supported universities have begun to accept growing numbers of transfer students. Initially, this acceptance was limited to students who had demonstrated superior performance (i.e. to those with a 3.0 CUM or better on a 4.0 scale). However, as their experience with transfer students increases, it is clear that NJIT will experience increased competition for these students. Such competition means that NJIT will be forced to work even more closely with the state's community colleges to introduce new programs that make transfer simpler and assure better performance from those who do transfer. In the process, it seems inevitable that the system of higher education will be strengthened and the phenomenon of New Jersey exporting large numbers of its young people to other states will decrease.

An Articulated Program Between the University of Central Florida and Valencia Community College

Wm. Michael Hooks
and
Frank E. Juge

The University of Central Florida (UCF) and Valencia Community College in Orlando, Florida, are vibrant, growing institutions, serving a population that has grown by 55 percent from 1980 to 1990 and a strong economy that is driven by major corporations such as Walt Disney World, Martin Marietta Electronic and Missile Systems, American Telephone and Telegraph, and Westinghouse Electric Corporation. The University of Central Florida serves the needs of the immediate central Florida community as well as an 11-county region. As a university, UCF seeks to serve a national and international constituency through both undergraduate and graduate programs. Valencia Community College serves a two-county district (Orange and Osceola counties) within the region served by UCF, providing associate in arts, associate in science, and continuing education programs.

The University of Central Florida each semester serves over 20,000 credit students with an annualized FTE of over 9,800 (based upon a factor of 40). Valencia Community College has been growing at the rate of more than 9 percent per year for the past five years. Each session more than 16,000 credit and 14,000 noncredit students enroll in programs at three campuses, three permanent centers, and over 30 community and business locations. Over 8,800 full-time equivalent students (based upon a factor of 40) were enrolled at the college in 1989–90.

INITIAL ARTICULATION EFFORTS

During each institution's early years, in the late 1960s and the 1970s, the faculty and administration focused primarily on the development of their own institutions. While there was some articulation between the two institutions, it was sporadic and limited to a few specific programs, as each institution was trying to develop strong academic programs and services and establish its identity within the community. The general attitude of the institutions was, at best, one of indifference, and, at worst, one of suspicion. There was little or no contact among administrative staff. By the mid-1980s it had become clear that there was a need for more comprehensive articulation between these two institutions.

The University of Central Florida established its main campus on the east side of Orlando in July 1968 in what was, at that time, a sparsely

populated area. Valencia Community College established its main campus on the west side of Orlando, 20 miles away, also in a sparsely populated area. In the intervening years, the central Florida population grew substantially, resulting in the establishment of Valencia's East Campus, located within seven miles of the UCF campus. Neither institution consulted the other in planning any of its major campuses or facilities.

The geographic proximity was related to another phenomenon: a shared student body. Each term, a large number of students are dually enrolled at both institutions. Further, the large number of students who transfer from Valencia to UCF confirms how interdependent the two institutions have become. More than 87 percent of those Valencia A.A. degree graduates who continue their education at a state university select UCF. Thirty-nine percent of the undergraduate transfers from community colleges to UCF come from Valencia. In UCF's upper division, 30 percent of the students transferred from Valencia.

One of the reasons for this high transfer rate, other than geographic proximity, is the Florida Articulation Agreement, which was adopted in May 1975. Students who graduate from a community college and hold an associate in arts degree are automatically admitted into one of the state universities, and all of their courses are accepted as transfer credit. Students may still have to complete certain prerequisites to be admitted to a particular program, but they do not have to meet the general education requirements at the university.

The institutions share not only students, but also faculty and community resources. Both institutions have strong college foundations and invite community leaders to participate in activities as well as to serve as board members. On a number of occasions, the same community leaders were serving on each foundation board. While initially there was some concern that an individual might only give to one institution, just the opposite has been found. Those individuals who tend to support one educational institution are just as likely to provide support for others.

Both institutions share adjunct faculty; in a few cases full-time faculty have served as adjuncts for the other institution. These various factors suggested the need for more cooperation, but it wasn't until the mid-1980s that a strong level of cooperation among administrative, academic affairs, and student services personnel started to become a reality.

EARLY STAGES OF COLLABORATION

In 1986 Paul C. Gianini, Jr., the new president of Valencia, sought to strengthen ties with the university and was enthusiastically received by then UCF president Trevor Colbourn. They met to discuss mutual concerns and informally agreed that their institutions would work more closely together. The result was that several key administrators held luncheon meetings to get to know one another better and to explore areas of potential collaboration. In the fall of 1986, a joint articulation conference between the two institutions was conducted. Administrators, faculty members, and other staff were brought together to review current areas of cooperation, examine concerns, and explore new opportunities for the mutual benefit of each organization. This two-day conference resulted in a "white paper" that was presented to the Florida State Legislature in the fall of 1987. Outlining present and future opportunities for cooperation

in the areas of academic programs, student services, business affairs, planning, resource development, and public relations, this document served as the centerpiece for the large number of cooperative ventures undertaken since that time.

Once the ice was broken and the presidents sanctioned greater articulation and stressed the importance of the relationship, administrators developed the perception that they would be supported in their articulation efforts. Interestingly, a level of trust and commitment developed rather quickly between the presidents and among several key administrators and spread throughout the institutions.

SPECIFIC ARTICULATED ACTIVITIES AND PROGRAMS

Academic skills center: The Florida Legislature mandated that community colleges teach college preparatory courses for those students with identified deficiencies. Since UCF is not charged with teaching such courses, and since some of the students admitted to the university were identified as needing these courses, UCF provided facilities for Valencia to operate an academic skills center on the UCF campus. Valencia personnel operate the center and provide UCF students with college preparatory developmental courses in mathematics and English. University students simultaneously register for both university and community college classes. Their enrollment records are transferred electronically to Valencia. This process enables students to complete their registration at the university without having to fill out duplicate forms or going to one of the Valencia campuses to complete the process.

Transfer student orientation: Each term UCF student services staff conduct transfer student orientation sessions exclusively for Valencia students. Associate in arts degree students who plan to transfer to UCF receive specific information about the university on the Valencia campuses. In addition, both institutions are developing "pre-transfer" orientation materials for students to use earlier in their community college experience.

Joint planning meetings: Faculty and administrative staff have jointly worked on planning teams to design cooperative projects. These joint sessions, called focus groups, provide a setting for developing ways in which student needs can be more effectively addressed via cooperative ventures. In 1988 eight focus group sessions were conducted dealing with the need to improve the transition of students from one institution to the other. These focus groups involved eight to 12 UCF and Valencia faculty and staff participating in 90-minute sessions, each related to one of the following topics: curriculum and faculty development, enrollment management/student services, management information systems, library/LRC, TV/audiovisual, joint facilities, resource development, and academic computing.

Participants were asked to visualize the year 2000 and describe the ideal set of programs and services that should exist and the steps that might be taken in the next five years to ensure that the institutions are jointly moving toward these ideal programs. Ideas were captured on flip charts and audiovisual tapes, analyzed by a smaller planning team to enhance each institution's comprehensive development plans, and used to prepare a cooperative articulation project. This model has been repeated a number of times with smaller projects. For example, in early 1990, focus groups helped plan joint educational facilities in Osceola County,

a rural but fast-growing area served by both institutions.

Title III Articulation Project: As a result of cooperative planning efforts, UCF and Valencia jointly submitted a five-year, $2.5 million cooperative grant for funding from the U.S. Department of Education, Strengthening Institutions Program, authorized by Title III of the Higher Education Act. This project was subsequently funded in 1988 and is currently in its second year of operation. The grant enables both institutions to work cooperatively to strengthen each institution's academic and student services programs. The project focuses on those students who begin their postsecondary careers at Valencia and who intend to transfer to UCF. The project builds upon past cooperative efforts to support student success as measured by achievement of the associate and bachelor's degrees. The project includes a number of components, including joint faculty development, new and part-time faculty training programs, joint institutional research, classroom feedback (assessment), workshops, technical support, joint electronic access to student data, joint access to library holdings, and transfer student assistance programs.

Electronic transcripts: Full-time computer programmers are currently working on electronic transfer of student grades and financial aid information. The goal is to achieve an efficient two-way information flow for Valencia students transferring to UCF along with UCF students taking courses at Valencia in a dual enrollment capacity.

Two-Plus-Two Scholarship Program: A special "Two-Plus-Two" Scholarship Program has been established. Annually, a joint fund-raising golf tournament is held, which has become the largest fund-raising golf tournament in central Florida. Funds are raised to support scholarships. An added benefit is that faculty and staff interact at the golf tournament, and both institutions can benefit by informing participants from the community of the importance of the scholarship program and the benefits of mutual institutional cooperation. The proceeds enable an outstanding Valencia graduate each year to be awarded a scholarship during the Valencia Community College commencement ceremonies. Recipients receive a cash award to cover the completion of their upper-division work at UCF.

Faculty-to-faculty activities: Each year the faculty and department chairs in various departments meet jointly to discuss common concerns and issues. During the past year, representatives from nursing, respiratory therapy, communications, mathematics, humanities, and technical and engineering-related programs met to discuss academic programs and student needs. Student services, computer services, and institutional research staff maintain regular contact and share information. Annually, a high-achievers' day is held at UCF, which brings both faculty and students from Valencia to participate in student orientations and tours and provides opportunities for faculty-to-faculty meetings on the UCF Campus.

Specialized workshops have been held dealing with writing across the curriculum. A special two-day intensive session was held recently involving English and communications faculty from both institutions in a joint writing development program. Follow-up meetings with both full- and part-time faculty were held throughout the following semester.

Joint facilities utilization: Joint-use centers have been established and staffed by both institutions

at two different locations in central Florida away from the main campuses. In both centers lower-division credit courses are offered by Valencia, and upper-division and graduate courses are offered by UCF. In addition, the two institutions jointly sponsor special programs such as real estate, computer training, management, and office skills institutes at these centers. These facilities provide an alternative location for students who cannot conveniently travel to one of the main campuses.

Joint seminars: From time to time, joint seminars are held dealing with such topics as drug testing, women's careers in higher education, classroom research, and leadership development.

Army ROTC: Army ROTC classes are taught on both campuses, with the UCF ROTC faculty teaching Valencia courses. The program has proven to be beneficial in minority student recruitment and retention. Students participating in this program may receive a Two-Plus-Two Scholarship to support all four years of their undergraduate degree program.

Articulated programs: Several special articulation agreements have been established between Valencia and UCF dealing with certain associate in science programs. In the nursing field, a transition program has been established for those students seeking to transfer from Valencia with an associate degree in nursing to obtain a bachelor's degree in nursing. This special program allows a nurse from Valencia to complete his or her B.S. degree efficiently. Courses are taken at both Valencia and UCF in an integrated program. Hospitality management, business education, and computer-integrated manufacturing programs have also established agreements.

Instructional feedback center: A unique component of the Title III Articulation Project involves a joint research and faculty support center. This center assists faculty with classroom feedback activities involving student learning and assessment. Research support using computer-assisted telephone interviewing and surveying techniques will be provided to faculty at both institutions.

Joint library program: A project now underway will enable students and faculty to have electronic access to card catalogs at both institutions. The interlibrary loan process has been greatly strengthened as a result of a courier service that delivers mail between the two institutions. In addition, telefacsimile machines are located in the libraries of both institutions to facilitate the exchange of journal articles. Materials are currently being developed that will provide training for students in the use of the libraries and the development of research skills at both institutions. These efforts are being made to standardize procedures to facilitate the transition process for students.

Central Florida Consortium of Higher Education: Because both UCF and Valencia have benefited greatly from their collaborative efforts, other community colleges that provide students to the University of Central Florida might also benefit from cooperative ventures. Thus, a consortium of higher education institutions was established that would involve four other east central Florida community colleges along with Valencia and the University of Central Florida. This consortium identifies common areas of interest and coordinates staff and program development activities among the member institutions. The consortium sponsors a number of professional development activities involving faculty and staff from all member

institutions. Some of the topics that have been presented include leadership development, mathematics workshops, writing across the curriculum, and humanities sessions. In 1990 workshops are planned on adjunct faculty, administrative leadership development, institutional effectiveness, substance abuse, program assessment, and part-time faculty. The member institutions provide funding to support the activities of a part-time executive director and secretary to help coordinate these activities. The presidents of each institution serve on the board of directors. A wide range of faculty and staff are involved in the various projects sponsored by the consortium.

CONCLUSION

In February 1988 the chairman of the Board of Directors of the American Council on Education (ACE), Judith Eaton, asserted in a presentation before the ACE annual meeting that by neglecting the relationships with community colleges, four-year institutions were missing a rich opportunity to boost the number of students who receive baccalaureate degrees. Eaton spoke as part of a panel with representatives from the Ford Foundation, AACJC, and Chicago State University who concluded that poor faculty communication between institutions is one of the greatest problems in the transfer process. Alison Bernstein, representing the Ford Foundation, identified as transfer problems yet to be addressed inadequate faculty involvement and insufficient data collection on transfer students. The cooperative activities being undertaken by Valencia and UCF address these problems directly. The manner in which the problems are addressed, keeping the focus on the student, reflects agreement with the comments of ACE panelist Dale Parnell, president of AACJC, who said, "We won't forget that students ought to be front and center in our consideration. Too often, we put students last." Many community colleges and four-year institutions exist virtually side by side across the nation, sharing common problems that invite cooperative solutions. The cooperative arrangements between UCF and Valencia demonstrate the synergism that can be created among institutions resulting in short- and long-term savings to the respective institutions.

In 1989 when Steve Altman was selected to be the new president of UCF, Valencia's Gianini met with him and shared the collaborative efforts underway between the institutions. Because of his previous experience in other areas of the country, Altman was somewhat surprised by the positive degree of cooperation that existed. He expressed a strong desire that the relationship should continue to be encouraged, as it was extremely valuable to both institutions. Both presidents have been very vocal in their support of one another, the strong relationship that exists, and the many cooperative activities being implemented or in the planning stages between the institutions.

As UCF and Valencia continue to work together, new areas of collaboration emerge. Mandated articulation, which was only minimally successful, was replaced by collaboration based on mutual trust and respect and a genuine desire to "do the right thing" for the shared student population. Required articulation policies will not automatically produce collaborative articulation. Both institutions must have leaders who have the vision to see the benefits of mutual cooperation to improve student success. The ongoing, personal relationship among colleagues at both institutions also is essential to ensure that activities are cooperatively planned and implemented.

The Articulation/Transfer Activities of the Los Rios Community College District

Barbara L. Howard

This case study will deal not only with California's emerging state policies for its educational systems, but also with particular programs and activities that the Los Rios Community College District, the University of California at Davis, California State University, Sacramento, and the University of the Pacific have developed over a period of eight years. In this region, "Intersegmental Cooperative Programs" had been in practice before many publications began describing their need.

The Los Rios Community College District is a large multi-campus district with a total district enrollment of approximately 48,000 students. The three campuses are: American River College, 24,000 students; Sacramento City College, 18,000 students; and Consumnes River College, 8,000 students. There is a satellite campus in Placerville that is a part of Consumnes River College. Los Rios also staffs four additional outreach centers.

BACKGROUND

When the Intersegmental Coordinating Council (ICC) was established by the California Education Round Table in 1987, it was charged with strengthening cooperative efforts among the educational systems in order to promote educational equity and improve the academic preparation, achievement, and progress of all students. The importance of coordinating activities among the educational segments has long been recognized. Such coordination, in fact, is an underlying principle of the Master Plan for Higher Education, for without strong and well-articulated academic programs and without an effective transfer process, the state's promise of access for all citizens to a university education cannot be realized. Revisions of the Master Plan in 1973 and 1989 have placed increasing emphasis upon articulation and transfer as well as cooperation among the segments. The 1989 report by a joint committee of the legislature applauded the development of the California Education Round Table and recommended a number of specific activities consistent both with the Round Table's original aims and with its purposes in establishing the ICC (*California Faces . . . California's Future*, pp. 54–57).

This increased emphasis on intersegmental cooperation stems partly from the growing awareness of how interdependent and interrelated

California's educational institutions have become. Because our institutions educate each other's students and prepare each other's teachers, because our students are more mobile than ever before, and because academic policy is more centralized, our educational institutions are inextricably linked, and the effectiveness of one institution inevitably depends upon the effectiveness of others.

This fact has become even more compelling in the 1980s because of new challenges created by the state's changing demographics and rapid technological development. There is a strong consensus among California's political, business, and educational leaders that the future of the state demands a more highly educated electorate and work force. More jobs will require college training, and even students who are not going on to college will require better basic skills and a greater capacity for critical thought in order to meet the demands of an increasingly complex society and of a workplace where those who cannot be efficiently trained or retrained qualify only for the most menial jobs. As noted in a recent report from the California Economic Development Corporation, without an educational system capable of preparing all of California's citizens for the reality of tomorrow's economy, society will be "increasingly polarized between the rich and the unskilled."

However, the task of effectively educating all citizens has become more difficult and more complicated, in part because demographic shifts in recent years have created a state much more diverse in ethnicity and cultural backgrounds. A greater proportion of our students are poor, Black, or Hispanic, and it is these students for whom the educational systems have proven least successful. The majority of students in the K-12 system are now from groups that have been considered "minorities," and despite extensive efforts, the achievement levels of these students are still substantially lower than those of their peers. This "achievement gap" is evident not only in schools, but in colleges and universities as well, where Black and Hispanic students transfer, earn certificates, and earn degrees at a much lower rate. According to the Master Plan report, 56 of every 1,000 white students entering the ninth grade in California will receive a baccalaureate degree from a public institution within five years; however, only 16 Black and 14 Hispanic students per thousand will achieve that goal (*California Faces. . . California's Future,* p. 3).

Whether one considers the problem from the perspective of educational equity, social justice, or economic imperatives, it is clear that California must do a more effective job of retraining, educating, and graduating its Black and Hispanic students. Social problems such as poverty, drugs, and crime, as well as linguistic or cultural barriers, may have more to do with the low academic achievement of some students than anything educational institutions do or fail to do. A comprehensive approach involving every aspect of state policy is essential if we are to stop the waste of California youth. However, that fact does not diminish the responsibility of the schools, colleges, and universities to provide meaningful educational opportunity to all of California's students, and that responsibility can only be fulfilled through a greater level of cooperation and mutual support than has been practiced or has been necessary in the past. The problems are simply too large and the causes too numerous for educational institutions to address independently of each other. Colleges and universities must assist schools in their efforts to restructure their

academic programs and to stimulate all students to fulfill their academic potential. Universities and community colleges must work together to facilitate and actively encourage the transfer of students to baccalaureate institutions. All segments must work together to ensure that curricula, assessment, and student services are aligned across the segments in ways that support the smooth progress of students through California's educational systems.

Without these cooperative efforts, neither the state nor its educational institutions can thrive.

In discussing the roles of the Educational Round Table and the ICC, the Master Plan report noted that ". . . the Intersegmental Coordinating Council is more than a staff adjunct to the Round Table; it serves as a crucial statewide forum where faculty, program administrators, and system representatives from all segments can meet and confer on program initiatives or shared projects. Seeking consensus, advising one another of the implications of segmental policy, devising new agendas—all these are valuable tasks" (*California Faces . . . California's Future,* p.55).

Indeed, in its first two years of existence, the ICC has served those functions and a number of others. As a statewide forum, the council and its four cluster coordinating committees have brought together representatives from faculty and administration, local institutions and system offices, large, well-established projects and small, innovative programs, and professional organizations and advocacy groups in order to share information, discuss critical educational issues, and develop ways in which educators can work together more effectively to achieve their common goals. The council has also assumed responsibility for ongoing intersegmental programs, such as the College Nights/Transfer Days Program, designed to coordinate outreach activities aimed at high school and community college students, and has disseminated competency statements developed by the academic senates of the university, state university, and community colleges to communicate to their peers in the secondary schools the competencies necessary for students to succeed in postsecondary education. In addition, the ICC has initiated or assumed responsibility for a number of statewide publications, including:

- *Futures*—A brochure sent to every eighth-grader in the state, designed to inform students and their parents about the courses necessary to prepare students for college or university work and to encourage students to pursue a college preparatory curriculum.

- *Systemwide and Statewide Assessment in California*—A report on assessment practices in all of the educational segments, designed to inform faculty, administrators, and policy-makers of current practices and facilitate the greater coordination of assessment across the segments.

- *Handbook of California Articulation Policies and Procedures*—handbook of policies governing the transfer of students and the articulation of courses and programs in all of California's postsecondary institutions; the handbook is designed to assist faculty and student service personnel in advising students.

- *Directory of Articulation Transfer Personnel*—A directory of various student service personnel in California's public and independent postsecondary institutions, distributed to every public high school in the

state as well as to postsecondary segments. (*Annual Report of Intersegmental Coordinating Council to the California Education Round Table,* pp. 1–3).

Revisions of the Master Plan in 1989 have resulted in policies that direct the public educational institutions, K-12, community colleges, California State Universities, and University of California Systems to cooperatively develop and implement programs designed to assist more students in obtaining a bachelor of arts degree, particularly underrepresented minority students.

In California, and particularly northern California, the educational system, K-12, community colleges, and public and private universities began working together approximately three years ago to develop programs that would start in kindergarten and take a student through to a baccalaureate degree. Along with the revised Master Plan, the appointment of the Intersegmental Coordinating Council has facilitated a more "working together" direction and relationship.

The Transfer and Articulation Intersegmental Coordinating Council Cluster Coordinating Committee serves as a forum for the review of policies and programs dealing with the transfer of students from community colleges to four-year institutions and with the progress of students throughout educational systems. The review of the Master Plan for Higher Education, first by an independent commission and then by a joint committee of the legislature, has focused a great deal of attention on transfer and articulation issues. Also, educational leaders have developed a clear consensus that the systems must cooperate more extensively in order to insure the smooth progress of California's students from one educational level to another.

The increased attention to issues of transfer and articulation and the increased emphasis on intersegmental cooperation have led to numerous proposals and new initiatives, some developed by the legislature, some by the segments or academic senates, and some by individual campuses. The committee has proven to be very useful in the communication and discussion of these ideas, issues, and initiatives.

The committee is composed of faculty and administrators involved in the creation and implementation of educational policy in the areas of transfer and articulation. It maintains communication with key groups concerned with these issues, such as the three statewide academic senates, the Intersegmental Committee of the Academic Senates, regional articulation organizations or consortia, and various intersegmental programs, such as the Transfer Center Project, the ASSIST Project, and the California Articulation Number Project. Thus, the committee consults with a wide range of professionals interested in the improvement of transfer and articulation and serves to strengthen communication among the various constituencies, promoting greater coordination and cooperation among these groups. Additionally, the committee serves to identify issues, conduct studies, and disseminate information related to transfer and articulation.

The tripartite system of public higher education in California has long been recognized for its ability to serve a broad range of students. The transfer function is the cornerstone of the California educational system's guarantee of access to a baccalaureate degree for all qualified students. Such access depends on the ability of the educational institutions to move students through the system from kindergarten to college graduation.

In 1960 rapidly increasing enrollments and concerns about student access to baccalaureate-granting institutions prompted the development of a Master Plan for Higher Education in California. That plan recommended that the public four-year segments decrease their lower-division enrollments, developing an enrollment ratio of 60 percent upper-division to 40 percent lower-division students in order to accommodate increasing numbers of transfers from the community colleges and thereby provide more students access to a baccalaureate degree.

In accordance with the 1960 Master Plan, both the University of California and the California State University increased their enrollment of community college transfer students. However, despite increases in the college-going rates of ethnic minority students, these students remained seriously underrepresented in the community college transfer population and in all of higher education. Moreover, transfer rates for all students began to decline in the mid-1970s. To address this decline as well as the problem of underrepresented ethnic minority students, educators developed a number of innovative statewide and regional programs, which were aimed at strengthening the transfer function and improving articulation.

The Los Rios District, along with its major feeder universities, University of California at Davis, California State University, Sacramento, and University of the Pacific, participate in a number of major statewide programs.

PROGRESS

Long before the Master Plan revisions in 1989 were in place, the Los Rios Community College District and the University of California at Davis joined together in what was one of the first "intersegmental programs" in California. The program was called "TOP" (Transfer Opportunity Program). Following several meetings of staff who worked out the details, the program was presented to the Los Rios Board of Trustees and the chancellor of the University of California at Davis in April 1983 when it was officially adopted. TOP became the forerunner of many intersegmental programs between Los Rios and its main feeder universities as well as other community colleges and universities throughout the state. Los Rios and University of California at Davis were recently honored by the American College Testing Program National Recognition Program for the "Outstanding Institutional Advising Program" for 1989. The addendum to this chapter illustrates this continuing program.

Since 1983 and the beginning of TOP, the Los Rios Community College District has implemented and participated in many intersegmental programs. The number of students, including underrrepresented students, transferring to a four-year university has steadily increased.

ARTICULATION AND TRANSFER—AN INSTITUTIONAL AND DISTRICT PRIORITY

- *Articulation* is the cornerstone for the many programs and activities in the Los Rios District. Course articulation has always been a top priority in our district. We have several thousand agreements between our campuses and four-year universities both in typical transfer majors and vocational education programs. Articulation must be in place, accurate, and updated on a regular basis in order for students to transfer successfully and for other program efforts to be successful. Many of California's policies and the Revised Master Plan

strongly recommend articulation activities between community colleges and high schools. A great deal of time is spent on both kinds of articulation. Research shows that students tend to enroll in institutions of higher education that have complete and current articulations. The appropriate department chairs (faculty) and the articulation officers of both the university and the Los Rios campuses sign the agreements to make them official.

- *Transfer.* Due to the changing demographics in California, a great deal of emphasis is placed on the recruitment and transfer of affirmative action students as well as students from all cultures. Los Rios ranks very high in the number of students transferring to four-year universities. Los Rios follow-up studies of transfer students found that after their first term at the university, they did as well as and usually better than the native students.

According to a recently released report by the California Postsecondary Education Commission (CPEC), the Los Rios Community College District ranks second in the state for the total number of students who transfer to the University of California and the California State University systems. The Los Angeles Community College District ranks first.

For the 1988–89 academic year, Los Rios transferred 2,705 students to the UC and CSU systems. The Los Angeles District, which is the largest in the state and more than twice the size of Los Rios, transferred 3,980 students.

The number of Los Rios students transferring to the UC system in 1988–89 increased by 26 percent over the year before, from 377 to 476. Transfers to the CSU system for the same period increased by 4.5 percent from 2,133 to 2,229. The 26-percent increase in transfers to the UC system is almost five times higher than the statewide increase of 5.6 percent, while the 4.5 percent increase to CSU is nearly three times the 1.6 percent statewide increase.

"Since our district is experiencing even greater increases than the state as a whole in the number of students who transfer to the UC and CSU systems, it appears that the extra emphasis we have placed on helping our students transfer is having results," commented Los Rios Chancellor Marjorie K. Blaha.

The colleges of the Los Rios District have worked closely with UC Davis, CSUS, and the University of the Pacific to develop strong transfer programs based upon well-articulated programs of study. The district developed a guaranteed transfer agreement over four years ago, and that program has become a model in the state. Under the agreement, a student who has completed the appropriate coursework with acceptable grades is guaranteed admission to the UC and CSU systems.

By identifying transfer students early, counselors and faculty ensure their passage through appropriate coursework and provide smooth transition to the universities.

An analysis of fall-only data shows that Los Rios ranks first in the state for the number of students transferring to the UC System and second in the state for transfers to the CSU system. For full-year transfers, Los Rios ranks fourth in the state to UC and second to CSU.

The CPEC report includes statistics for the number of ethnic minorities transferred to the

two state university systems for fall 1987 and fall 1988. For the Los Rios District, the number of Asian students who transferred to the UC system decreased from 23 percent to 18 percent, while the number of Hispanic and Black students increased from 9 percent to 10 percent and from 4 percent to 5 percent respectively.

Many of the following programs/activities are oriented toward transferring. All staff, faculty, and administrators work very hard to assist the articulation officers in monitoring and increasing the number of Los Rios transfer students.

ASSIST—Articulation System Stimulating Interinstitutional Student Transfer

ASSIST is a tremendous transfer/articulation system that plays a very important part in the transfer and articulation procedure. Articulation agreements and progress checks for students can be done quickly and accurately. Anyone can use it, as the directions are very clear.

Since 1985 the Los Rios Community College District has been a part of ASSIST. We were one of the 17 community colleges originally funded by the state. The transfer centers have had this computerized articulation system available for counselors and students since 1987. Los Rios is part of the Sacramento Valley Region that meets on a biannual basis to share data and procedures. Staff from four universities and four community colleges attend on a regular basis.

Transfer Admission Agreement—District, Campus, and University Commitment

This concept came from the Transfer Center Steering Committee and is conducted under the auspices of the Transfer Center and counseling departments. It is an agreement/guarantee of admission for Los Rios students who meet eligibility requirements to either University of California at Davis, California State University, Sacramento, University of the Pacific, California State University, Fresno, or Humboldt State University. It also includes a guarantee of admission to the major of their choice.

The Transfer Admission Agreement began in 1985. Surveys of students who transferred with a Transfer Admission Agreement were very positive. University of California at Davis conducted a follow-up on its transfer students and found that 75 percent of the students who had a Transfer Admission Agreement registered and completed their degree. They were better prepared and more knowledgeable about the university and its procedures. Only 42 percent of the students without Transfer Admission Agreements actually registered.

Transfer Centers

The goal of the Transfer Center Project is to increase the overall transfer rate of students, particularly underrepresented ethnic minorities, by coordinating resources and services designed to facilitate the transfer process. This project was initiated in 1985 and is established at sites serving approximately 24,000 students annually. The project involves 20 community colleges, 14 CSU campuses, eight UC campuses, and two independent universities. A recent independent evaluation of the project found that the overall transfer rates to UC and CSU have improved at the 20 campuses with state-funded transfer centers, and that the rates for Hispanic and Asian students are higher at these campuses than at colleges without transfer centers.

Each Los Rios campus has a well-developed transfer center with a wealth of supplies furnished

by universities and state monies. The Transfer Opportunity Program was brought into the Transfer Center Project, and the University of California at Davis Transfer Center adviser spends two days a week at the two larger colleges and one day at the smaller one. Staff from Los Rios and California State University, Sacramento, also formed an agreement similar to this one. The University of the Pacific is our independent university partner in this program. An intersegmental committee oversees the Transfer Center Project and is the policy making group for Los Rios's three centers. This steering committee meets once a month.

Some of the many activities of the Transfer Center are making sure that transfer students have up-to-date information and providing workshops on admissions, financial aid, housing, how to fill out the applications, advertising, and making appointments for other four-year representatives, and providing trips to the universities. "On-the-spot admissions" aimed specifically at affirmative action students generates large numbers of transfers. The "Spring in Davis" and Crossover Enrollment at California State University, Sacramento allows those students who apply to the University of California at Davis and/or California State University, Sacramento, to take one or two courses at the university during their last term before they transfer. All fees are waived for the students; the only cost to them is for books. This activity gives the students an opportunity to experience what it's really like to take a course at the university. California State University, Fresno, later joined this activity.

CAN—California Articulation Numbering System

In 1983 the state legislature directed the California Postsecondary Education Commission to study the feasibility of a common course numbering system for public postsecondary institutions in California. The study recommended the implementation of the CAN system instead of common course numbering. Rather than requiring all institutions to use the same course numbers, CAN provides a cross-referenced course identification number for commonly taught, lower-division, transferable courses. Under the CAN system, courses are evaluated for acceptance "in lieu of" other courses, not as direct equivalencies. CAN was established in 1985 and operates under the direction of an intersegmental advisory committee. The advisory committee initiates and reviews policy, establishes program goals, and monitors progress. Significant progress has been made in the implementation of CAN in the past four years. Over 3,800 courses have been qualified by the 108 college and university campuses now participating. In the view of the CAN staff, project activities have had a positive effect statewide in improving the understanding of articulation and in involving faculty more extensively in the articulation of curriculum. Faculty involvement in the CAN Project is expanding, due in part to the efforts of the Intersegmental Committee of the Academic Senates and to activities developed as Community College/California State College Joint Projects.

MESA/MEP—Math Engineering Science Achievement/Minority Engineering Program

This program was established at American River College by the transfer center director with the aid of a regular counselor. Its goal is to be the "bridge" between the MESA program in the K-12 sector and higher education. The program officially began in spring 1989 with three students, and now 175 students are

enrolled. Many activities have been put in place to give these students incentives to transfer, and the three universities are involved in the program. American River College began this program with very little funds but with institutional commitment. In July 1989, the college received a state grant of $30,000 to continue. This was the first MESA/MEP program in a community college in California.

Puente Project

The Puente Project, which is co-sponsored by the California Community Colleges and the University of California, is designed to address the problems that Mexican-American students experience in community college English courses. The Puente Project employs an innovative approach to teaching English composition and provides students with additional counseling services to assist them in the transfer process.

Sacramento City College has been a part of Puente for a number of years. The counselor who teaches part of the classes and the faculty and Transfer Center director work closely together to ensure success for these students. Students in the program do well and succeed at the transfer institutions.

More than 60 faculty and counselors are participating in 20 Puente Projects at community college campuses throughout the state. Since 1982 over 1,800 students have enrolled in Puente, with 83 percent successfully completing the developmental writing class and 72 percent completing English 1A. Studies indicate that the success rates for non-Puente Mexican-American students in these writing courses are only 35 percent and 47 percent respectively.

Early Alert

The Early Alert Program lets faculty at all three campuses identify students who are not doing well in their class by sending an "alert" message to the counselor and/or to the Transfer Center director. They then work together to assist the students in successfully meeting their goals.

Faculty-to-Faculty Meetings

Los Rios has hosted a number of faculty-to-faculty (same discipline) meetings between community college and four-year faculty and between high school and college faculty. These highly successful meetings increase articulation and transfer and bonding among the faculty. California State University, Sacramento, and University of California at Davis also host faculty meetings that include high school and community college faculty.

Faculty Exchange—Sacramento City College has had a faculty exchange program with the University of California at Davis for the past two years. One of the University of California at Davis's faculty teaches English 1A at Sacramento City for a year and one of Sacramento City College's faculty teaches English-Subject A on the Davis Campus. Next fall a professor from California State University, Sacramento, who teaches "Administration of Justice," will teach a lower-division course that Sacramento City College does not offer. A Sacramento City College faculty member will teach a course at California State University, Sacramento. These exchanges not only benefit students, but also allow faculty to share ideas.

2 + 2 and 2 + 2 + 2 Projects

Since 1985 the Community College Board of Governors has identified high school articulation

as an important part of its basic agenda. Los Rios has implemented two courses and program articulation projects: the 2 + 2 Vocational Education Projects and the 2 + 2 + 2 Career Education Projects. These projects are designed to improve articulation in career and occupational areas. Both projects have served to enhance faculty-to-faculty communication, create a context in which faculty work together to improve student preparation, and involve faculty in staff development activities. The projects serve to formalize the articulation of secondary school curricula and to create clear educational pathways for students that enable them to move from one segment of education to the next highest level without duplication of effort.

The 2 + 2 projects, funded by federal grants and jointly administered by the State Department of Education and the California Community Colleges, are designed to articulate vocational programs between the two systems. The designation 2 + 2 refers to the last two years of a structured vocational program in the high school and the first two years in a community college competency-based program in the same curricula area. Los Rios in conjunction with selected high school faculty have developed projects in electronics, welding, auto body, home economics, aeronautics, business, writing, mathematics, and computer science.

The 2 + 2 + 2 articulation projects focus on career education curriculum leading to a baccalaureate degree. These state-funded projects involve the last two years of the high school curriculum, the first two years of the community college curriculum, and the last two years of an upper-division curriculum at a four-year college or university. Los Rios projects include business, writing, mathematics, home economics, electronics, and computer science.

Capital Education Consortium

This is a consortium of high schools, Los Rios Community College District, the University of California at Davis, California State University, Sacramento, and University of the Pacific who joined together approximately eight years ago in order to pool resources and produce educational programs and materials for high school and elementary school students. The thrust of the program is to help these students and their parents become more aware of the advantages of a transfer program as well as beginning their transfer program at the Los Rios Community Colleges. Some of the consortium's projects have been

- **College—It Can Make a Difference**—A folder that is mailed to all juniors in high schools in the greater-Sacramento area, providing them with information on application, admission procedures, and majors available at the Los Rios campuses.

- **MESA College Handbill**—Distributed to all area high schools and providing similar information to the "College—It Can Make a Difference" folder.

- **College Days**—Two-day college fair held at the University of California at Davis for all area students, faculty, and parents.

Matriculation

Each of the Los Rios colleges developed a matriculation plan three years ago. Funded by the state, the plans were implemented in fall 1987 to assist new college students in determining goals and developing a plan of action to complete their goals successfully. The plan consists of the following:

1. Application to one of Los Rios's colleges;
2. Assessment to determine ability in reading, writing, and math;
3. Orientation to distribute pertinent material, answer questions, and discuss what it's like to be in college;
4. Counseling to develop an "educational plan" with a counselor's assistance;
5. Registration to secure classes; and
6. Counseling—each student sees a counselor once a semester to discuss where he/she is, changes in goals, plans, and possible careers.

CONCLUSION

This case study merely scratches the surface of a number of innovative programs, most of which were developed on an intersegmental basis with staff and faculty from our major feeder universities, University of California at Davis and California State University, Sacramento.

The goal has always been to develop programs and activities that promote success for all students, particularly given the changing demographics of California. Much has been done and is being done. We still have a long way to go. We in Los Rios feel particularly proud that we truly have an institutional team—staff, instructional faculty, and student services faculty—who, because of a variety of identified needs, came together to plan, develop, and implement these programs and activities. Equally important has been the support of the administration, who provided funds and time that were so desperately needed. Without intersegmental cooperation among the institutions and a professional staff who trust and respect each other, the programs that have been mentioned would not be possible.

REFERENCES

Annual Report of the Intersegmental Coordinating Council to the California Education Roundtable, 1989.

California Faces . . . California's Future: Education for Citizenship in a Multicultural Democracy. The Final Report of the Joint Committee for Review of the Master Plan for Higher Education. March, 1989.

Addendum: Transfer Opportunity Program

Phil DuBois and
Barbara L. Howard

INSTITUTIONAL DESCRIPTION

The Transfer Opportunity Program is the result of a combined effort by the University of California at Davis, a public university, and the Los Rios Community College District, a two-year junior/community college. The Davis campus is one of nine campuses in the University of California system. The Los Rios Community College District includes American River, Cosumnes River, and Sacramento City colleges.

PROGRAM DEVELOPMENT

The Transfer Opportunity Program (TOP) was developed in response to a significant decline in the number of students transferring from community colleges to four-year institutions in the California system of higher education. This decline in transfers was particularly pronounced among students from ethnic minority groups and educationally or economically disadvantaged backgrounds.

In 1983 representatives from the University of California at Davis and the Los Rios Community College District recognized the need for a cooperative program to encourage students to transfer to UC Davis and to ease their transition from the community college. As a result of their mutual concern, they agreed to establish a collaborative program to improve the articulation process between the two institutions and entered into a formal agreement that outlines their joint responsibilities for staff supervision, program evaluation, and funding.

TOP now includes 21 colleges in 13 districts and has served as a model in the development of transfer centers in community colleges throughout California.

GOALS AND OBJECTIVES

The goals of the program are (1) to identify, attract, and motivate potential transfer students to pursue their education through the baccalaureate level; (2) to strengthen the academic preparation, performance, and retention of community college district students who transfer to the university; and (3) to increase the transfer participation rate of community college district students who are underrepresented or who do not traditionally enroll at the university.

PROGRAM DESCRIPTION

TOP is a unique program designed to strengthen the transfer function through program activities coordinated by a UC Davis Transfer Adviser. The adviser's salary is shared with the district. The adviser is available at each community college at least one day a week to work with counselors and advise students. In the Los

Rios District, the transfer adviser spends two days a week on the larger campuses and one day a week on the smaller ones.

The TOP adviser provides detailed information and assistance to students on admissions and transfer requirements, financial aid, housing, tutoring, internships, student life, and other university services. Typically, the adviser evaluates student transcripts to assure that students have completed their high school requirements and that community college courses are comparable and transferable to UC Davis, answers questions about majors and career goals, arranges for campus visits, disseminates articulation publications and newsletters, and enrolls community college students in concurrent university courses free of charge. In addition, the adviser often participates in presentations to interested groups and organizations on the merits of TOP and the advantages of the program.

The TOP adviser also works with counselors and students on developing a Transfer Admission Agreement (TAA), which is an agreement between the Los Rios Community College District and the University of California, Davis; California State University, Sacramento; and the University of the Pacific, Stockton. This agreement guarantees admission to these universities one year in advance in all majors provided the student satisfactorily completes all eligibility requirements as specified in the agreement.

The program is monitored by a steering committee composed of two or three individuals from each of the community colleges within the district and university representatives who include the directors of undergraduate admissions, Relations with Schools, Student Special Services, and the TOP adviser. The committee ensures coordination among campus units and community colleges involved in the implementation of the program, develops policy and operational procedures in program development, monitors staff performance and resolves problems in program management, and reviews the program's effectiveness in meeting its stated objectives.

PROCEDURES USED IN PROGRAM EVALUATION

Program evaluation is the joint responsibility of the university and the community college. It involves student evaluations, data collection by the university's Undergraduate Admissions Office, and evaluation of these data by the Joint Steering Committee.

Student evaluations are obtained through a questionnaire mailed to students at the community college and the university. On occasion, only the students at the community college are surveyed.

RESULTS/OUTCOMES

The impact of the Transfer Opportunity Program on the institutions involved and the students served by this program has been extremely positive, as evidenced by students' evaluation surveys and the resulting increases in the university's enrollment of transfer students. In addition, the fact that the program, which started with one agreement just six years ago between the university and the Los Rios Community College District, has grown to include a total of 13 agreements and five TOP advisers in 1989 is further testimony to the program's success in meetings its goals and objectives.

To date, three surveys of TOP students to evaluate the program's effectiveness and to assess student satisfaction have been conducted by

UCD's Student Special Services. Students have rated their advising very highly and have attributed their successful transfer to the university to the TOP adviser. The most recent study indicates that TOP continues to meet the needs of transfer students: 80 percent of the surveyed students (those who entered fall 1988) thought the TOP adviser helped them with admissions; 47 percent with financial aid; and 42 percent with housing. Seventy-two percent of the respondents believed that the counseling and advising services provided prior to transfer were beneficial. One out of four thought that they would not have transferred without the TOP adviser's assistance.

The success of TOP in increasing transfer to the university is also clear. In the last two years, there has been a significant increase in the enrollment of transfer students at UC Davis. In fall 1987 there were 26 percent more TOP transfer students than the previous year. In fall 1988 TOP transfer students increased 33 percent and ethnic minority student transfers increased 56 percent. These figures compare quite favorably to those reported for total campus transfers (which increased by only 8 percent) and ethnic minority student transfers (which increased 21 percent).

To date, 314 community college students have entered into Transfer Admission Agreements (TAA). Of these, 207 students have actually enrolled. The 25-percent loss from application to enrollment is much lower than non-TAA applicants, in which there is a 60 percent loss from application to enrollment.

POTENTIAL FOR ADAPTATION BY OTHER INSTITUTIONS

TOP has become a model program that has been expanded to include other institutions. Since the first TOP partnership was developed, 21 colleges in 13 districts now participate. In addition, 33 community colleges have now developed Transfer Admission Agreements with UCD.

The transfer centers that have been established in many of the community colleges throughout the state are a direct result of the Transfer Opportunity Program. These centers have used TOP's concepts and goals in order to prepare students for transfer to four-year institutions.

A Context for Transfer Policy in Texas Higher Education

Gloria Ann Lopez
and
Dale Campbell

The Texas Higher Education Coordinating Board was created by the Texas Legislature to provide leadership and coordination for the higher education system in Texas. Its governing policies for better articulation and for fiscal accountability were established by the Higher Education Coordinating Act of 1965. Guided by the principles of quality, access, diversity, funding, effective management, and accountability outlined in the *Texas Charter of Higher Education* (1987), the staff of the Coordinating Board extensively use the committee process to assist in the formulation of state policy. Thus, a flexible partnership is encouraged through broad participation of administrators and faculty at Texas community colleges and universities in conjunction with members of other state agencies. Large distances between geographic locations of postsecondary institutions as well as demographic considerations are major factors for using this committee process.

The public higher education system in Texas serves over 300,000 students in 49 community and junior college districts, one statewide technical institute system with four campuses, and 37 universities. Each year, over 150,000 first-time students enter the community colleges and technical institutes. According to a 1986 Coordinating Board study on transfer of first-time entering students enrolled in general academic courses in Texas public community and junior colleges, community college transfers represent more than 15 percent of the new students in 11 of the public four-year universities, and over 19 percent of the original student population transferred to a Texas public university between fall 1981 and spring 1985, making the transfer function a major issue when considering Texas higher education issues.

By legislative act, the Coordinating Board is to develop a basic core of general academic courses that, when taken by a junior college student during his or her first two years of collegiate study, are freely transferable among all accredited public institutions of higher education in Texas. Texas chose to develop a higher education regional council system to promulgate communication about curriculum and academic transfer issues in partnership effort between the two-year colleges and universities and the private colleges.

Over the years, faculty and administrators of universities and junior colleges have collaborated

with Coordinating Board staff on studies to develop transfer curricula in a wide range of discipline majors and, after adoption by the board, for use statewide in facilitating student transfers from the community colleges to the university.

Faculty and administrators have also collaborated with the Coordinating Board staff on the development of the *Community College General Academic Course Guide Manual,* a listing of descriptions of academic and developmental courses acceptable to the universities for transfer. These strategies for coordination and linkage between the two higher education levels have resulted in the creation of a cadre of experts from the local institutional level who are knowledgeable about their institutions and the legislation on transfer and articulation issues that drive the statewide committees toward action.

Two case studies described below are illustrative of how the state has worked in partnership with its institutions to provide support and recognition for individual efforts and encouragement and nurturing of intrainstitutional relationships that improve articulation and transfer issues.

INSTITUTIONAL CASE STUDY

Early in the 1980s, a group of educators from the community colleges and universities collaborated in a series of workshops on the academic preparation of students for Texas colleges. The move was sparked by concerns from the academic instructional leadership that students' low level of basic skills prevented them from handling college-level coursework.

John Grable, now president of Brazosport College, was at that time Brazosport's academic instructional leader. His personal interest and commitment to providing quality instruction for all students at Brazosport College led him to conduct an institutional research study of reading level of students enrolled in history classes. His startling and alarming findings led him to conduct a larger study, which included other community colleges and resulted in the report, *A Second Chance for Texans: Remedial Education in Two-Year Colleges.*

This report was one of several that eventually led the Texas Legislature to pass House Bill 2182 in 1987, a mandate for an assessment, placement, and remediation program in Texas colleges and universities. The Texas Academic Skills Program should help students to be more prepared in performing their college studies.

Ideas Grable shared with Coordinating Board staff were the catalyst for a grant proposal to the Fund for the Improvement of Postsecondary Education. The subsequent grant award resulted in a report, *Improvement of Post-Secondary Education: College-Level Competencies,* which defined college-level reading, writing, and math skills.

Through his individual efforts to promote institutional effectiveness and quality, Grable has been proactive in raising awareness about the successful solutions to transfer problems. He has worked with faculty and administrators at the University of Houston-Central Campus and Sam Houston State University and received their agreement to admit any student who attends Brazosport College and to guarantee the transfer of his or her coursework to their universities without loss of credit. Eventually, the student will receive a computerized receipt for a four-year coursework map at either

university. It will include coursework that must be taken at Brazosport College during the first two years as well as coursework to be taken during the last two years at the university, with occasional progress reports.

While data programmers at Brazosport College are currently working on a program to produce the computerized four-year degree program map, the institutional leadership is already communicating it to its other partners in the Gulf Coast Regional Consortium. A second project related to transfer activities is the college's participation in the Electronic Transcript Network (ETN), considered a response to Senate Bill 543, which calls for sending institutions to receive feedback on their transfers. The goal is to get universities to provide feedback to community colleges on their transfer students: how they perform academically after they transfer, whether they complete their studies, and jobs attained as a result of the baccalaureate degree. This will result in improved data collection and tracking of transfer students.

STATE CASE STUDY

Coordinating Board staff initiated a cooperative effort in fall 1988 to facilitate the transition of minority student transfers from community/junior colleges to universities on a pilot basis.

The board, in partnership with one community college and two universities, implemented the Blinn College Students' Ethnic Transfer Project: Sam Houston State University and Texas A&M University (BEST). Taking a student-centered approach to the transfer of minority students, the administrators and counselors of these institutions have encouraged minority students who started at Blinn College to stay in college and to complete university baccalaureate degree programs through a variety of student development activities. As a result, enrollment of Blacks and Hispanics has increased at all three campuses. Under the direction of Robert Wright, assistant to the vice president for academic affairs, Blinn College provides academic advisement, career counseling, and study skills seminars to minority students.

Additionally, Blinn has implemented an early warning system designed to identify students who are in danger of dropping out of college and to provide them with immediate counseling. A unique feature of the BEST project is parental involvement. For example, a breakfast is scheduled for parents during which representatives from the participating institutions are available to answer questions and provide transfer information.

One value-added dimension of the BEST Project is to familiarize minority students with university life and to avoid the transfer shock syndrome. In an effort to assure a smooth transition from the community college to the university, minority students from Blinn College are transported to either Texas A&M or Sam Houston to attend University Day activities. BEST students familiarize themselves with the campus, receive financial aid information, and meet with university faculty and staff and other Blinn transfer students.

For the leadership of Blinn College, Sam Houston State University, and Texas A&M University, improving the transfer of minority students is a financial commitment as well. The BEST Project publishes a college transfer newsletter that is mailed to each minority student. In addition, BEST students have been the recipients of transfer scholarships by Texas A&M University.

As a result of this succesful pilot, a second transfer project, the South Texas Transfer Project, has been encouraged between Southwest Texas Junior College and three additional state universities (Southwest Texas State University, University of Texas at San Antonio, and Texas A&I University in Kingsville). It is in the first year of implementation, although vice presidents, academic deans, registrars, and directors of admission from each of the four colleges spent a full year planning the project with Coordinating Board staff.

As the two examples have demonstrated above, personal interest, institutional commitment, and trust are desired characteristics we need to foster for all of our relationships if we are to resolve articulation and transfer issues.

In recent years, the quality of the discussions at the regional council level has diminished as financial and enrollment management demands of the 1960s and 1970s have consumed institutional attention. Unless a university is actively involved in recruiting students by providing outreach services, the regional councils resort to becoming vehicles for resolving the turf battles between community/junior colleges rather than developing curriculum or resolving transfer disputes.

Several events in Texas have recently occurred to refocus attention on transfer and articulation issues.

- In 1985 the Texas Legislature mandated the transfer of postsecondary vocational education from the Texas Education Agency to the Texas Higher Education Coordinating Board. The action resulted in the creation of the Community Colleges and Technical Institutes Division, which serves as an advocate for community college issues, including transfer, in the state.

- Legislation passed in 1989 has mandated that the Coordinating Board will now resolve transfer disputes between any two higher education institutions.

- The demographics of Texas demand that the education of its minority population improve for its future economic well-being. Providing quality and supportive instruction in community college and university partnerships will assist the transfer minority student in completing his or her educational goals.

RECOMMENDATIONS FOR STATE POLICY

The *Community College General Academic Course Guide Manual* provides a mechanism for allocating state funds to Texas community and junior colleges for general education and academic transfer courses, compensatory and developmental studies programs, and other unique-need courses.

The adoption of core curriculum guidelines by the Coordinating Board in October 1989, recent institutional curriculum changes across the state, and a concern that the 16 subject area transfer curricula that the Coordinating Board and all public colleges and universities have worked with for over 20 years provide good opportunities to review the course descriptions found in the manual and to promote discussions surrounding articulation and transfer concerns.

As a result, an advisory committee has been charged by the Commissioner of Higher

Education to update the *Community College General Academic Course Guide Manual*. The charge affects a number of important areas of concern to both community colleges and senior universities, including review of transfer and articulation issues (such as a common numbering system), guaranteeing transfer of the associate degree, and using regional councils as forums for articulation of degree programs, development of curriculum, and facility of transfer; definition of a desirable number of semester credit hours for the core curriculum of associate degree programs; review of the implementation of compensatory education policies; integration of college-level competencies into the state's core curriculum; and development of guidelines for institutions' compliance with Coordinating Board rules on resolution of transfer disputes for lower-division courses.

Contributors

Dale Campbell
Assistant Commissioner
The Texas Higher Education Coordinating Board

Phil DuBois
Associate Vice Chancellor of Academic Programs
University of California at Davis

Wm. Michael Hooks
Vice President for Planning, Research, and Development
Valencia Community College

Barbara L. Howard
Director, Transfer Programs
Los Rios Community College District

Frank E. Juge
Associate Vice President for Academic Affairs
University of Central Florida

Gloria Ann Lopez
Program Director for Transfer and Basic Skills
The Texas Higher Education Coordinating Board

William R. Odom
Deputy Executive Director
Florida State Board of Community Colleges

Gary Thomas
Provost
New Jersey Institute of Technology

AACJC

American Association of
Community and Junior Colleges
One Dupont Circle, NW
Suite 410
Washington, DC 20036

ERIC Clearinghouse for
Junior Colleges
MAY 11 1990